Massachusetts Draft 2010-2020 Solid Waste Master Plan APPENDICES

APPENDICES

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Appendix A Data Collection and Analysis

This Appendix describes how MassDEP collects and analyzes solid waste data.

Data Collection

Table A-1 shows the sources MassDEP relies on to track solid waste data. Each of the data sources is described below.

Table A-1: Major Solid Waste Data Sources

Data Type	Data Source
Disposal	Annual Facility Reports
Imports / Exports	Annual Facility Reports
	• Survey of Other States' Data
Residential Recycling Rate By Municipality	• Municipal Recycling & Diversion Data Sheets ¹
MSW Recycling	Municipal Recycling & Diversion Data Sheets
	Recycling Processor Reports
	Bottle Bill Tonnage
Composting	Compost Site Reports
	 Municipal Recycling & Diversion Data Sheets
C&D Recycling	Recycling Processor Reports
	Annual Facility Reports
Other C&D Diversion	Annual Facility Reports
	Recycling Processor Reports

Annual Facility Reports

In Massachusetts, all landfills, combustion facilities, transfer stations and handling facilities must submit an Annual Facility Report to MassDEP summarizing the type and quantity of waste managed. Data from the landfill and combustion facility reports provide information regarding total tonnage of waste disposed in Massachusetts. The reports also contain information on the import and export of waste.

Survey of Other States' Data

¹ MassDEP has discontinued the Municipal Recycling and Diversion Data Sheet for at least calendar year 2009 and perhaps beyond due to a lack of staff resources.

In addition to using Annual Facility Reports, MassDEP gathers information on the import and export of solid waste across state lines by contacting neighboring state solid waste management agencies and significant out-of-state facilities. MassDEP compares amounts from each of these sources to Massachusetts' data and the largest import/export amount is used.

Municipal Recycling & Diversion Data Sheet

Each year through calendar year 2008, MassDEP has surveyed all 351 cities and towns in the Commonwealth to determine the quantity of residential waste disposed and material recycled through municipal programs. MassDEP has discontinued the Municipal Recycling and Diversion Data Sheet for calendar year 2009, and perhaps beyond, due to a lack of staff resources. The below description summarizes the data sheet methodology for calendar year 2008.

MassDEP requests that material from all single and multi-family homes, condominiums, and apartment buildings be reported. As the information is utilized to determine a residential recycling rate by municipality, it is important that all residential households be included. As a result, MassDEP also requests the quantity of residential waste disposed and material recycled outside of the municipal program as collected through private hauler subscription service. In some cases, municipal officials are able to provide MassDEP with tonnage figures for material collected by private haulers; however, tonnage figures more often are not available. MassDEP has addressed this gap in residential trash tonnage by assigning private hauler tonnage for trash and in some cases, recyclables, based upon either a statewide average, to municipalities where private hauler subscription is provided to residential households in that municipality.

The survey also collects data on centralized (off-site) composting of leaf and yard waste that is used to determine the amount of residential composting² taking place at municipal and commercial compost sites. For those municipalities that have either a yard waste collection program in place and/or educate and enforce an ordinance, by-law and/or policy on yard waste as a waste banned material, a default compost tonnage is assigned in the event that the municipality does not report actual tonnage of leaves/yard waste. The default rate is based on population where a factor of .07 tons of leaves/yard waste per capita is utilized.

MassDEP does not adjust reported recycling tonnages to account for municipalities who did not report or whose data is incomplete. However, MassDEP does estimate waste generation for those municipalities that do report but provide incomplete data. The default generation rate is based on population where a factor of .54 tons per capita is utilized to determine generation. The recycling and/or composting tonnages are deducted from the generation assigned to reach a figure for tons disposed.

Compost Site Reports

Each year, MassDEP requests a compost site report from all municipal and commercial composting sites. This survey provides the total centralized composting tonnage. To derive a base commercial composting amount, the total amount of residential composting reported on the Municipal Recycling & Diversion Data Sheets is subtracted from the total amount reported on the Compost Site

² Composting tonnage is considered residential if it originates from a residential source, regardless of where it is composted.

³ Composting tonnage is considered commercial if it originates from a commercial source, regardless of where it is composted.

Reports. Also, 100,000 tons is added to the base commercial composting amount to account for farm composting which is not reported to MassDEP. This figure is an estimate from the Massachusetts Department of Agricultural Resources (DAR).

Recycling Processor Reports

Each year, MassDEP surveys all known recycling processors in the state. Companies that process MSW material as well as construction and demolition (C&D) debris for reuse are surveyed for information on the type and amount of material processed. The results are used to provide the total statewide MSW recycling tonnage and to estimate the C&D recycling rate. MassDEP attempts to contact all processors, however, for known processors that do not respond, their reported tonnages from the previous year or most recent year is carried forward. Information from large C&D processing facilities is extracted from the Annual Facility Reports filed with MassDEP through regulatory requirements. See below for an explanation of how residential and commercial recycling figures and the C&D recycling rate are calculated from these reports.

Bottle Bill Tonnage

Bottle bill recycling results are credited toward the residential recycling rate. Container recovery (i.e., deposit redemption) rates are obtained from the Massachusetts Department of Revenue. MassDEP estimates the recycled tonnage using trade association data on both material composition (glass, aluminum, plastic, etc) of the beverage containers recovered and average unit weights for different container types. Composition percentages are adjusted based on information provided by deposit container collection companies to reflect the specific conditions in Massachusetts.

Data Calculations

The following formulas and definitions are used to estimate quantities in Table 3, Solid Waste Generation and Management, 2000 - 2008 and in Appendix B. The terms, emphasized in bold type, are presented in the same order in which they appear in the table. Also, completely lower case terms are not included in the table but are calculated in the data analyzed.

Total Generation = In-State Disposal + Diversion + Disposal Exports – Disposal Imports

MSW Generation = MSW Disposal + MSW Diversion + MSW Exports - MSW Imports
Residential Generation = Residential Recycling + Residential Composting + Bottle Bill +
MSW Disposal

Commercial Generation = MSW Generation - Residential Generation

Non-MSW Generation = C&D + Other Non-MSW Generation

C&D Generation = C&D Disposal + C&D Recycling + C&D Other Diversion + C&D Exports – C&D Imports

Other Non-MSW Generation = Other Non-MSW Disposal + Other Non-MSW Diversion + Other Non-MSW Exports – Other Non-MSW Imports

Diversion = MSW Diversion + Non-MSW Diversion

MSW Diversion = Residential Recycling + Commercial Recycling + Residential Off-site Composting + Commercial Composting⁴

Residential Recycling is estimated using Municipal Recycling & Diversion Data Sheet data plus Bottle Bill data

Commercial Recycling = MSW Recycling (estimated using Recycling Processor Report data and Bottle Bill data) - Residential Recycling

Residential Off-Site Composting is estimated using the Municipal Recycling & Diversion Data Sheet data.

Commercial Composting is estimated using Compost Site Report data – Residential Composting + DAR estimates for farm composting.

Non-MSW Diversion = C&D Recycling + C&D Other Diversion

C&D Recycling is estimated using data from the Recycling Processor Report and Annual Facity Report data.

C&D Other Diversion includes C&D fines used for landfill cover, wood burned as fuel, and C&D residuals used for inactive landfill closures and is estimated using Recycling Processor Report and Annual Facility Report data.

Other Non-MSW Diversion includes post-industrial materials prepared as fuel cubes.

Disposal = Landfill Disposal + Combustion Disposal + Disposal Exports – Disposal Imports

Disposal Exports and **Imports** are estimated using data from Annual Facility Reports and a survey of other states.

Landfill Disposal = MSW Disposal + C&D Disposal + Other Disposal

MSW Disposal is estimated using data from Annual Facility Reports

C&D Disposal is estimated using data from Annual Facility Reports

Other Disposal is estimated using data from Annual Facility Reports, and represents all non-MSW disposal other than C&D (e.g., contaminated media, recycling residues, industrial waste, street sweepings, etc.)

Combustion = MSW Combustion + Non-MSW Combustion

MSW Combustion is estimated using data from Annual Facility Reports

Non-MSW Combustion is estimated using data from Annual Facility Reports

⁴ This methodology will change for 2009 data. Because MassDEP will no longer have municipal reporting to identify residential recycling and composting tonnage, we will no longer have the data to use to calculate separate amounts for residential and commercial recycling and residential and commercial composting. Instead, MassDEP will publish 2009 recycling and composting data that includes both residential and commercial tonnage together as "MSW Recycling" and "MSW Composting".

Appendix B
2008 Residential Solid Waste and Recycling Data by Municipality

Column A: Municipality	Column B: Total Tons Disposed (Column C or D + Column E if applicable)	Column C: Reported Disposal Tonnage	Column D: Default Disposal Estimate (when no disposal tonnage reported)	Column E: Residential Subscription Hauler Disposal Tonnage (estimated disposal for residents not served by a municipal program)	Column F: Total Tons Recycled (Paper, glass, plastic, metal, textiles, swap shop)	Column G: Total Tons Composted (Column H+I+J)	Column H: Tons of Leaf & Yard Waste and Christmas Trees Collected	Column I: Home Compost Bin Credit (Tons)	Column J: Default Compost Program Credit (Education, Enforcement and/or Pick- up/Drop-off	Column K: Tons Hazardous Products and Difficult to Manage Wastes (Columns L+M)	Column L: Tons Hazardous Products & Difficult to Manage Waste Collected	Column M: Tons Hazardous Products Collected at One-Day Events	Column N: Total Tons Diverted (Columns F+G+K)	Column O: Tons Generated (Sum of Disposal & Total Diversion) (Columns B+N)	Column P: Recycling Rate (Total Tons Diverted/ Tons Generated) (Column N/Column O)
ABINGTON	5,687	5,687	0	_	1,640	1,120.0	0.0	0.0	1,120.0	1.0	0.0	1.0	2,761	8,448	33%
ACTON	6,940	3,757	0	-,	1,462	489.2	489.2	0.0	0.0	26.0	16.0	10.0	1,977	8,917	22%
ACUSHNET	4,364	4,364	0	-	458	189.9	188.0	1.9	0.0	12.7	12.7	0.0	660	5,024	13%
ADAMS	4,133	0	4,133	0	368	255.2	252.2	3.0	0.0	8.0	0.1	0.8	624	4,757	13%
AGAWAM	11,819	8,913	0	_,	2,198	2,714.4	2,702. 0	12.4	0.0	72.1	70.6	1.5	4,984	16,803	30%
ALFORD	389	255	0	134	74	29.8	0.0	0.0	29.8	0.1	0.1	0.1	104	493	21%
AMESBURY	5,853	5,853	0	0	795	168.8	150.0	18.8	0.0	1.3	0.0	1.3	965	6,818	14%
AMHERST	8,525	201	0	8,324	897	2,441.2	0.0	0.0	2,441.2	90.3	88.7	1.6	3,428	11,953	29%
ANDOVER	11,777	11,777	0	0	4,192	6,115.9	6,100. 0	15.9	0.0	76.2	72.3	3.9	10,384	22,161	47%
AQUINNAH	229	229	0	0	82	35.0	35.0	0.0	0.0	0.0	0.0	0.0	117	346	34%
ARLINGTON	15,808	15,808	0	0	4,695	3,764.5	3,708. 0	56.5	0.0	105.6	101.8	3.9	8,565	24,373	35%
ASHBURNHAM	<u>-</u>	lete Data													
ASHBY	874	47	0	827	94	1.3	0.0	1.3	0.0	0.8	0.8	0.0	96	970	10%
ASHFIELD	418	418	0	0	285	134.3	0.0	8.3	126.0	14.1	12.3	1.8	433	851	51%
ASHLAND	4,615	3,426	0	1,189	1,734	206.9	206.9	0.0	0.0	37.1	36.3	0.8	1,978	6,593	30%
ATHOL		1,994	1,994	0	0	663	805.0	0.0	0.0	805.0	16.4	16.1	0.2	1,484	3,478
ATTLEBORO	11,931	11,931	0		5,647	2,584.5	2,541. 4	43.1	0.0	444.9	444.1	0.8	8,677	20,608	42%
AUBURN	6,634	5,535	0	1,099	877	1,098.9	0.0	0.0	1,098.9	2.4	0.0	2.4	1,978	8,612	23%
AVON	Did Not Report														NA

Column A: Municipality	Column B: Total Tons Disposed (Column C or D + Column E if applicable)	Column C: Reported Disposal Tonnage	Column D: Default Disposal Estimate (when no disposal tonnage reported)	Column E: Residential Subscription Hauler Disposal Tonnage (estimated disposal for residents not served by a municipal program)	Column F: Total Tons Recycled (Paper, glass, plastic, metal, textiles, swap shop)	Column G: Total Tons Composted (Column H+I+J)	Column H: Tons of Leaf & Yard Waste and Christmas Trees Collected	Column I: Home Compost Bin Credit (Tons)	Column J: Default Compost Program Credit (Education, Enforcement and/or Pick- up/Drop-off	Column K: Tons Hazardous Products and Difficult to Manage Wastes (Columns L+M)	Column L: Tons Hazardous Products & Difficult to Manage Waste Collected	Column M: Tons Hazardous Products Collected at One-Day Events	Column N: Total Tons Diverted (Columns F+G+K)	Column O: Tons Generated (Sum of Disposal & Total Diversion) (Columns B+N)	Column P: Recycling Rate (Total Tons Diverted/ Tons Generated) (Column N/Column O)
AYER	2,814	1,015	0	,	545	240.7	237.2	3.5	0.0	63.6	63.5	0.1	850	3,664	23%
BARNSTABLE	24,355	11,783	0	12,572	3,493	1,003.0	1,003. 0	0.0	0.0	151.0	149.7	1.2	4,647	29,002	16%
BARRE	1,253	1,012	0	241	498	60.0	60.0	0.0	0.0	47.7	47.7	0.0	606	1,859	33%
BECKET	411	411	0	0	150	0.0	0.0	0.0	0.0	8.0	7.8	0.1	158	569	28%
BEDFORD	4,548	4,548	0	0	1,546	813.8	810.0	3.8	0.0	1.9	0.0	1.9	2,362	6,910	34%
BELCHERTOWN	6,031	1,088	0	4,943	634	615.6	611.0	4.6	0.0	47.5	47.5	0.0	1,297	7,328	18%
BELLINGHAM	6,906	6,286	0	620	1,018	1,120.0	0.0	0.0	1,120.0	45.3	43.0	2.2	2,183	9,089	24%
BELMONT	8,679	8,679	0	0	2,640	2,056.4	2,033. 0	23.4	0.0	37.8	35.7	2.1	4,734	13,413	35%
BERKLEY	2,024	525	0	1,499	244	32.0	32.0	0.0	0.0	18.2	18.2	0.0	294	2,318	13%
BERLIN	Did Not Report														NA
BERNARDSTON	513	399	0		204	151.0	0.0	0.0	151.0	9.3	9.2	0.1	365	878	42%
BEVERLY	14,979	11,782	0	0,101	3,793	1,424.2	1,400. 0	24.2	0.0	158.2	155.5	2.7	5,375	20,354	26%
BILLERICA	18,628	17,181	0	1,447	3,314	1,476.4	1,475. 0	1.4	0.0	9.1	6.8	2.3	4,800	23,428	20%
BLACKSTONE	2,395	2,395	0	0	2,174	624.5	0.0	0.0	624.5	30.7	30.7	0.0	2,829	5,224	54%
BLANDFORD	Did Not Report														NA
BOLTON	779	717	0	62	450	363.7	1.0	2.1	360.6	28.7	26.9	1.8	842	1,621	52%
BOSTON	·	221,148	0	0	25,780		1		0.0		722.5		33,816		13%
BOURNE	8,823	8,823	0	0	2,109	1,428.5	1,419. 0	9.5		248.7	246.2		3,786	12,609	30%
BOXBOROUGH	1,026	1,026	0	0	444	322.0	0.0	0.0	322.0	0.9	0.9	0.0	767	1,793	43%
BOXFORD	1,995	-	0	0	1,310	629.7	1.1	8.3	620.3	34.4	33.3	1.1	1,974	3,969	50%
BOYLSTON	Incomp	olete Data													

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BRAINTREE	15,573	15,573	0	0	2,216	4,452.0	4,452. O	0.0	0.0	27.9	17.8	10.2	6,696	22,269	30%
BREWSTER	6,139	6,139	0	0	1,046	182.0	181.2	0.8	0.0	53.2	44.5	8.7	1,281	7,420	17%
BRIDGEWATER	Did Not Report	-													NA
BRIMFIELD	Did Not Report														NA
BROCKTON	32,099	25,534	0	6,565	5,179	7,368.0	7,345. 0	23.0	0.0	155.1	151.3	3.8	12,702	44,801	28%
BROOKFIELD	1,355	579	0	776	170	36.0	36.0	0.0	0.0	17.9	17.9	0.0	224	1,579	14%
BROOKLINE	20,670	20,670	0	0	9,151	1,906.0	1,906. 0	0.0	0.0	13.1	0.0	13.1	11,070	31,740	35%
BUCKLAND	326	248	0	78	179	139.9	0.0	0.0	139.9	1.3	1.2	0.1	320	646	50%
BURLINGTON	8,981	8,981	0	0	1,638	1,250.0	1,250. 0	0.0	0.0	7.9	0.8	7.1	2,896	11,877	24%
CAMBRIDGE	23,173	23,173	0	0	9,094	2,176.0	2,052. 0	124.0	0.0	158.4	148.1	10.4	11,428	34,601	33%
CANTON	8,206	8,206	0	0	1,156	4,340.0	4,340. 0	0.0	0.0	55.6	54.7	0.9	5,552	13,758	40%
CARLISLE	1,846	1,838	0	8	782	387.7	0.0	0.0	387.7	107.0	106.4	0.6	1,277	3,123	41%
CARVER	Did Not Report														NA
CHARLEMONT	181	181	0	0	101	97.4	0.0	0.0	97.4	0.1	0.0	0.1	198	379	52%
CHARLTON	3,396	3,396	0	0	476	0.0	0.0	0.0	0.0	6.2	0.0			3,878	
CHATHAM	4,179	4,179	0	0	1,352	1,242.5	1,236. 0	6.5	0.0	52.5			2,647	6,826	39%
CHELMSFORD	13,020	13,020	0	0	4,143	610.7	<i>559.2</i>	51.5		26.0	25.7	0.3	4,780	17,800	
CHELSEA	13,022	12,135	0		859	175.3	175.3	0.0	0.0	5.3	4.9	0.4	1,040	14,062	
CHESHIRE	1,015	808	0	207	300	267.2	265.8	1.4	0.0	17.9			585	1,600	
CHESTER	180	119	0	61	82	84.0	0.0	0.0	84.0	3.5	3.5	0.0	170	350	49%

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CHESTERFIELD	181	181	0	0	100	0.88	0.0	3.9	84.1	3.9	3.8	0.1	192	373	51%
CHICOPEE	24,263	19,397	0	4,866	5,860	5,178.5	5,171. 0	7.5	0.0	140.7	138.0	2.7	11,179	35,442	32%
CHILMARK	406	406	0	0	119	46.0	46.0	0.0	0.0	0.9	0.0	0.9	166	572	29%
CLARKSBURG	Did Not Report														NA
CLINTON	Did Not Report														NA
COHASSET	2,329	2,329	0	0	1,308	97.8	94.2	3.6	0.0	40.9	40.7	0.2	1,447	3,776	
COLRAIN	255	234	0	21	153	125.9	0.0	0.0	125.9	5.5	5.4	0.0	284	539	53%
CONCORD	4,024	2,434	0	1,590	3,073	476.7	408.4	68.3	0.0	41.5	40.7	0.8	3,591	7,615	47%
CONWAY	610	594	0	16	294	126.6	0.0	0.0	126.6	11.1	11.0	0.0	432	1,042	41%
CUMMINGTON	249	249	0	0	109	73.1	0.0	4.7	68.5	3.6	1.8	1.8	186	435	43%
DALTON	1,046	577	0	469	404	62.4	62.4	0.0	0.0	0.0	0.0	0.0	466	1,512	31%
DANVERS	13,569	9,641	0	3,928	1,961	310.4	299.7	10.7	0.0	46.6	43.7	2.9	2,318	15,887	15%
DARTMOUTH	11,625	5,209	0	,	4,670	775.5	755.9	19.6	0.0	59.1	56.7	2.4	5,505	17,130	32%
DEDHAM	5,624	4,503	0	1,121	1,800	2,387.4	2,379. 0	8.4	0.0	11.8	10.1	1.7	4,199	9,823	43%
DEERFIELD	1,535	1,225	0		477	229.0	229.0	0.0	0.0	7.3	7.0	0.3	713	2,248	32%
DENNIS	8,852	5,323	0	3,529	1,713	2,082.9	2,082. 9	0.0	0.0	73.8	68.2	5.6	3,870	12,722	30%
DIGHTON	1,671	1,671	0	0	490	265.8	265.8	0.0		0.0	0.0		756	2,427	31%
DOUGLAS	2,681	2,681	0	0	512	3.7	1.6	2.1	0.0	21.2	21.2	0.0	537	3,218	
DOVER	2,298	2,298	0	-	686	528.3	109.2	0.0	419.1	48.5	47.5	1.0	1,262	3,560	
DRACUT	12,630	12,126	0		2,407	669.7	669.2	0.6	0.0	19.3	17.5	1.8	3,096	15,726	
DUDLEY	4,028	616	0	-,	285	601.2	601.2	0.0	0.0	15.7	15.7	0.0	902	4,930	
DUNSTABLE	999	502	0	497	191	224.0	0.0	0.0	224.0	10.1	8.9	1.3	425	1,424	30%
DUXBURY	4,244	2,900	0	1,344	2,744	2,342.4	<i>2,338</i> .	4.4	0.0	95.2	93.3	1.9	5,182	9,426	55%

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EAST	2,245	2,245	0	0	1,132	986.1	0.0	1.9	984.2	1.2	0.0	1.2	2,119	4,364	49%
BRIDGEWATER	2,243	2,245	U		1,132	300.1	0.0	1.9	304.2	1.2	0.0	1.2	2,119	4,504	49 /6
EAST BROOKFIELD	609	576	0	33	167	85.0	85.0	0.0	0.0	7.6	7.5		259	868	30%
EAST LONGMEADOW	3,831	3,831	0		1,958	4,985.0	4,976. 2	8.8	0.0	33.5	30.9		6,976	10,807	65%
EASTHAM	2,936	2,936	0	0	1,085	593.2	559.0	34.2	0.0	53.1	47.9	5.2	1,731	4,667	37%
EASTHAMPTON	Did Not Report														NA
EASTON	8,700	2,497	0	-,	847	1,637.5	6.5	0.0	1,631.0	7.5	0.0		2,492	11,192	22%
EDGARTOWN	5,939	5,939	0	_	1,591	266.0	266.0	0.0	0.0	37.9	35.8		1,895	7,834	24%
EGREMONT	436	383	0		216	74.4	0.0	1.9	72.5	2.6	2.3		293	729	40%
ERVING	500	500	0	_	210	95.0	95.0	0.0	0.0	2.5	2.4	0.1	308	808	38%
ESSEX	1,337	1,249	0		404	18.0	18.0	0.0	0.0	16.6	15.8		439	1,776	25%
EVERETT	20,513	17,560	0	,	2,047	61.5	57.1	4.4	0.0	23.3	23.1	0.2	2,132	22,645	9%
FAIRHAVEN	5,965	5,965	0		1,068	1,057.3	1,046. 0	11.3	0.0	28.1	25.3		2,153	8,118	27%
FALL RIVER	44,515	39,346	0	5,169	2,075	3,667.1	3,637. 2	29.9	0.0	196.5	195.9	0.6	5,938	50,453	12%
FALMOUTH	14,486	14,486	0	0	3,772	4,755.0	4,641. 0	114.0	0.0	92.2	86.4	5.8	8,619	23,105	37%
FITCHBURG	19,163	15,737	0	3,426	1,260	1,080.0	1,080. 0	0.0	0.0	115.4	113.3	2.1	2,455	21,618	11%
FLORIDA	323	323	0	0	83	2.0	2.0	0.0	0.0	4.1	4.0	0.0	89	412	22%
FOXBOROUGH	5,127	3,374	0	1,753	1,805	6,500.0	6,500. 0	0.0	0.0	0.0	0.0	0.0	8,305	13,432	62%
FRAMINGHAM	16,461	16,306	0	155	6,577	2,309.6	2,271. 9	37.7	0.0	142.0	133.2	8.8	9,028	25,489	35%

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FRANKLIN	12,093	9,074	0	3,019	3,310	1,454.5	1,450. 0	4.5	0.0	64.4	63.5	1.0	4,829	16,922	29%
FREETOWN	3,954	3,456	0	498	399	120.0	120.0	0.0	0.0	26.6	26.6	0.0	545	4,499	12%
GARDNER	4,613	3,538	0	1,075	1,487	7,392.0	7,392. 0	0.0	0.0	24.7	16.9	7.8	8,904	13,517	66%
GEORGETOWN	Incomplete Data														NA
GILL	214	214	0	0	149	95.4	0.0	0.0	95.4	0.0	0.0	0.0	244	458	53%
GLOUCESTER	10,619	9,069	0	1,550	2,879	3,030.6	3,003. 5	27.2	0.0	145.1	143.4	1.7	6,055	16,674	36%
GOSHEN	169	169	0	0	95	68.4	0.0	3.9	64.5	4.0	3.7	0.2	167	336	50%
GOSNOLD	Did Not Report														NA
GRAFTON	5,316	5,316	0	0	869	1,114.0	0.0	0.0	1,114.0	11.4	11.4	0.0	1,995	7,311	27%
GRANBY	3,724	3,724	0	0	581	173.6	173.6	0.0	0.0	69.5	69.5	0.0	824	4,548	18%
GRANVILLE	330	242	0	88	136	105.2	0.0	0.0	105.2	10.1	10.1	0.0	252	582	43%
GREAT BARRINGTON	Did Not Report														NA
GREENFIELD	4,094	4,094	0	_	2,159	675.2	671.0	4.2	0.0	32.5	32.5	0.0	2,867	6,961	41%
GROTON	3,504	2,550	0	954	1,230	242.7	226.0	16.7	0.0	43.2	42.5	0.7	1,516	5,020	30%
GROVELAND	Did Not Report														NA
HADLEY	Did Not Report														NA
HALIFAX	1,711	801	0	910	410	1,234.2	1,219. 2	15.0	0.0	28.6		0.0	1,673	3,384	49%
HAMILTON	1,923	1,918		5	995	118.0		0.0	0.0	17.3			1,131	3,054	37%
HAMPDEN	366	366		0	226	20.1	20.0	0.1	0.0	0.4	0.0		247	613	40%
HANCOCK	246	246		0	101	50.8		0.3	<i>50.5</i>	9.2	9.2		161	407	40%
HANOVER	4,693	4,693	0	0	1,648	1,444.5	1,437. 0	7.5	0.0	79.4	74.6	4.8	3,172	7,865	40%

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HANSON	3,260	2,743	0	517	540	679.2	0.0	1.0	678.2	32.8	30.5	2.3	1,252	4,512	28%
HARDWICK	1,446	0	1,446		165	0.4	0.0	0.4	0.0	8.6	8.6	0.0	174	1,620	11%
HARVARD	2,168	1,548	0		543	411.3	5.3	0.0	406.0	26.0	26.0	0.0	981	3,149	31%
HARWICH	6,910	4,644	0	2,266	1,518	3,175.4	3,175. 4	0.0	0.0	93.4	90.7	2.7	4,787	11,697	41%
HATFIELD	Did Not Report														NA
HAVERHILL	25,789	25,789	0	0	499	7,228.5	7,200. 0	28.5	0.0	22.0	19.6	2.4	7,749	33,538	23%
HAWLEY	Incomplete Data														NA
HEATH	242	242	0	0	92	55.8	0.0	0.0	55.8	0.7	0.6	0.0	149	391	38%
HINGHAM	7,016	7,016	0	0	2,896	4,469.0	4,469. 0	0.0	0.0	139.5	136.1	3.5	7,505	14,521	52%
HINSDALE	752	447	0	305	181	146.2	146.2	0.0	0.0	8.0	7.9	0.1	335	1,087	31%
HOLBROOK	2,080	1,679	0	401	805	112.4	112.4	0.0	0.0	0.0	0.0	0.0	918	2,998	31%
HOLDEN	5,719	4,492	0	1,227	2,103	1,811.5	1,807. 8	3.8	0.0	14.4	14.4	0.0	3,929	9,648	41%
HOLLAND	Did Not Report														NA
HOLLISTON	4,443	4,020	0	423	2,039	1,553.8	1,540. 0	13.8	0.0	55.7	53.2	2.5	3,648	8,091	45%
HOLYOKE	8,364	8,364	0	0	2,132	3,457.3	3,441. 2	16.1	0.0	76.8	75.6	1.2	5,666	14,030	40%
HOPEDALE	1,947	1,911	0	36	655	18.3	18.3	0.0	0.0	6.4	6.1	0.3	679	2,626	26%
HOPKINTON	4,636	4,636	0		1,976	1,063.2	10.4	2.8	1,050.0	4.6	0.1	4.5	3,044	7,680	40%
HUBBARDSTON	Incomp	lete Data													
HUDSON	5,013	1,400	0	3,613	695	1,168.4	1,168. 4	0.0	0.0	12.4	11.1	1.3	1,876	6,889	27%
HULL	5,830	0	5,830	0	464	37.7	33.6	4.1	0.0	6.8	6.8	0.0	509	6,339	8%

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HUNTINGTON	714	491	0	223	197	159.9	0.0	7.7	152.2	3.4	3.3	0.2	360	1,074	34%
IPSWICH	3,932	3,932	0	0	2,222	1,250.0	1,250. 0	0.0	0.0	5.0	4.2	0.8	3,477	7,409	47%
KINGSTON	6,241	4,347	0	1,894	798	684.1	682.0	2.1	0.0	54.0	53.2	0.8	1,536	7,777	20%
LAKEVILLE	4,125	1,451	0	2,674	633	705.3	700.0	5.3	0.0	22.8	22.8	0.0	1,361	5,486	25%
LANCASTER	Did Not Report														NA
LANESBOROUGH	1,289	0	1,289	0	116	210.1	0.0	0.8	209.3	0.2	0.0	0.2	326	1,615	20%
LAWRENCE	Did Not Report														NA
LEE	2,527	0	2,527	0	220	412.1	0.0	2.6	409.5	0.4	0.2	0.2	632	3,159	20%
LEICESTER	4,483	0	4,483	0	944	87.5	86.8	0.6	0.0	48.4	48.4	0.0	1,079	5,562	19%
LENOX	3,026	0	3,026	0	108	0.0	0.0	0.0	0.0	1.9	1.6	0.3	110	3,136	4%
LEOMINSTER	12,429	12,429	0	0	1,622	1,491.0	1,490. 0	0.9	0.0	43.1	38.5	4.6	3,156	15,585	20%
LEVERETT	331	331	0		248	137.9	0.0	5.6	132.3	8.0	8.0	0.0	394	725	54%
LEXINGTON	9,336	8,774	0	562	5,960	5,101.6	5,068. 2	33.4	0.0	167.5	158.1	9.4	11,229	20,565	55%
LEYDEN	_	lete Data													
LINCOLN	1,373	1,133	0		619	36.4	34.0	2.4	0.0	50.0	50.0	0.0	705	2,078	34%
LITTLETON	3,887	2,354	0	1,533	925	228.0	228.0	0.0	0.0	30.4	30.3	0.1	1,183	5,070	23%
LONGMEADOW	4,114	4,114	0	0	2,400	3,282.1	3,274. 0	8.1	0.0	38.3	37.5	0.8	5,721	9,835	58%
LOWELL	Did Not Report														NA
LUDLOW	7,228	7,228	0	0	1,374		0	0.8		36.9	36.9		2,626	9,854	27%
LUNENBURG	1,966	1,966	0	0	883	250.0		0.0		0.6	0.0		1,134	3,100	
LYNN	34,474	34,474	0	0	2,369	10,010.4	10,000 .0	10.4	0.0	55.4	55.4	0.0	12,435	46,909	27%

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LYNNFIELD	5,011	5,011	0	_	1,247	469.7	469.2	0.5	0.0	1.8	0.4	1.4	1,719	6,730	26%
MALDEN	22,421	18,066	0	4,355	3,041	700.0	700.0	0.0	0.0	135.2	135.2	0.0	3,876	26,297	15%
MANCHESTER	Did Not Report														NA
MANSFIELD	6,433	5,519	0	914	3,236	4,167.2	4,167. 2	0.0	0.0	27.9	27.9	0.0	7,431	13,864	54%
MARBLEHEAD	11,230	9,989	0	1,241	2,145	4,355.3	4,350. 0	5.3	0.0	67.1	64.4	2.8	6,567	17,797	37%
MARION	2,082	2,082	0	0	305	418.2	418.2	0.0	0.0	11.1	11.1	0.0	734	2,816	26%
MARLBOROUGH	15,733	13,833	0	1,900	2,560	3,880.0	3,856. 0	24.0	0.0	107.7	101.8	5.8	6,547	22,280	29%
MARSHFIELD	8,407	7,642	0	765	3,911	3,168.7	3,154. 0	14.7	0.0	127.9	125.1	2.8	7,208	15,615	46%
MASHPEE	7,803	7,803	0	0	1,097	1,010.7	1,004. 0	6.7	0.0	92.4	88.8	3.6	2,200	10,003	22%
MATTAPOISETT	2,600	2,600	0	0	1,026	1,381.8	1,370. 4	11.4	0.0	19.3	18.8	0.5	2,427	5,027	48%
MAYNARD	2,153	1,993	0	160	1,206	741.4	0.0	0.0	741.4	17.5	16.0	1.5	1,965	4,118	48%
MEDFIELD	3,787	3,270	0	517	1,032	2,711.8	2,693. 0	18.8	0.0	52.3	51.5	0.8	3,796	7,583	50%
MEDFORD	27,700	25,957	0	1,743	2,944	1,220.6	1,186. 7	33.9	0.0	42.2	42.2	0.0	4,207	31,907	13%
MEDWAY	4,184	3,626	0	558	2,151	2,289.3	2,289. 3	0.1	0.0	37.8	36.2	1.6	4,478	8,662	52%
MELROSE	12,555	9,637	0	2,918	2,536	4,205.3	4,199. 0	6.3	0.0	50.9	49.2	1.6	6,792	19,347	35%
MENDON	Did Not Report														NA
MERRIMAC	1,511	1,061	0	450	547	13.0	13.0	0.0	0.0	1.8	0.0	1.8	562	2,073	27%
METHUEN	19,796	17,581	0		3,108	5,007.9				102.5			8,218	28,014	29%

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MIDDLEBOROUGH	7,617	7,617	0	0	1,151	1,163.3	0 1,152.	10.6	0.0	29.4	29.4	0.0	2,344	9,961	24%
						-	7								
MIDDLEFIELD	149	149	0	_	55	41.1	0.0	3.2	37.9	3.8	3.7	0.0	100	249	40%
MIDDLETON	3,682	<i>2,</i> 373	0	-	537	129.7	129.7	0.0	0.0	57.8	57.4	0.4	725	4,407	16%
MILFORD	9,606	8,469	0	1,137	2,138	1,886.6	1,882. 9	3.8	0.0	89.9	89.0	0.9	4,115	13,721	30%
MILLBURY	3,379	3,379	0		498	50.0	50.0	0.0	0.0	0.0	0.0	0.0	548	3,927	14%
MILLIS	3,306	525	0	2,781	314	603.2	603.2	0.0	0.0	14.4	14.4	0.0	932	4,238	22%
MILLVILLE	1,200	1,200	0	0	243	0.0	0.0	0.0	0.0	0.0	0.0	0.0	243	1,443	17%
MILTON	4,659	4,659	0	0	3,574	2,008.5	2,007. 2	1.3	0.0	32.7	30.2	2.5	5,616	10,275	55%
MONROE	Did Not Report														NA
MONSON	Did Not Report														NA
MONTAGUE	1,305	1,305	0	0	766	594.2	0.0	0.0	594.2	18.6	18.2	0.4	1,379	2,684	51%
MONTEREY	447	357	0	90	167	73.9	0.0	2.3	71.7	16.7	16.6		258	705	37%
MONTGOMERY	338	0	338	0	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94	432	22%
MOUNT WASHINGTON	Did Not Report														NA
NAHANT	Did Not Report														NA
NANTUCKET	1,918	1,918	0	0	16,947	2,433.0	2,433. 0	0.0	0.0	106.9	104.4	2.5	19,487	21,405	91%
NATICK	7,476	7,476	0	0	4,140	1,558.0	1,545. 0	13.0	0.0	53.6	49.8	3.8	5,752	13,228	43%
NEEDHAM	7,841	7,841	0	0	6,146	9,501.7	9,478. 0	23.7	0.0	110.3	108.6	1.7	15,758	23,599	67%
NEW ASHFORD	124	0	124	0	9	0.5	0.0	0.5	0.0	0.0	0.0	0.0	9	133	7%

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NEW BEDFORD	44,452	42,897	0	1,555	3,814	5,510.5	5,491. 0	19.5	0.0	221.8	219.1	2.6	9,546	53,998	18%
NEW BRAINTREE	Incomplete Data														NA
NEW	1,176	471	0	705	164	0.0	0.0	0.0	0.0	7.3	7.0	0.3	171	1,347	13%
MARLBOROUGH															
NEW SALEM	194	194	0	0	96	0.0	0.0	0.0	0.0	0.1	0.0		96	290	33%
NEWBURY	3,176	1,522	0	1,654	579	488.5	1.6	3.9	483.0	14.1	14.1	0.0	1,082	4,258	25%
NEWBURYPORT	7,538	7,538	0	0	2,219	2,273.9	2,272. 0	1.9	0.0	127.6	126.7	0.9	4,620	12,158	38%
NEWTON	26,174	26,174	0	0	3,982	6,475.3	6,399. 1	76.2	0.0	282.2	274.0	8.1	10,739	36,913	29%
NORFOLK	2,450	2,450	0	0	974	782.0	782.0	0.0	0.0	41.9	41.1	0.8	1,798	4,248	42%
NORTH ADAMS	7,386	0	7,386	0	457	79.0	79.0	0.0	0.0	0.0	0.0	0.0	536	7,922	7%
NORTH ANDOVER	10,802	9,120	0	1,682	2,676	2,792.8	2,780. 7	12.1	0.0	56.5	53.6	2.9	5,525	16,327	34%
NORTH ATTLEBOROUGH	5,703	5,589	0	114	2,958	410.5	400.0	10.5	0.0	34.8	31.9	2.9	3,403	9,106	37%
NORTH BROOKFIELD	1,110	643	0	467	352	143.8	141.0	2.9	0.0	18.8	17.9	0.9	515	1,625	32%
NORTH READING	5,621	5,621	0	0	1,462	966.0	966.0	0.0	0.0	12.0	9.4	2.6	2,440	8,061	30%
NORTHAMPTON	7,535	2,827	0	4,708	3,425	1,371.8	1,275. 0	96.8	0.0	127.8	126.6	1.3	4,925	12,460	40%
NORTHBOROUGH	3,307	3,307	0	0	1,530	315.2		3.2	0.0	79.0	77.0	2.1	1,924	5,231	37%
NORTHBRIDGE	8,059	8,059	0	0	1,746	1,571.1	1,558. 0	13.2	0.0	8.0	8.0	0.0	3,326	11,385	29%
NORTHFIELD	642	435	0	207	355	206.6	0.0	0.0	206.6	5.6	5.4	0.2	567	1,209	47%
NORTON	6,918	0	0	6,918	1,312	104.0	101.2	2.8	0.0	21.2			1,437	8,355	
NORWELL	4,033	4,033	0	0	1,251	265.5	261.5	4.1	0.0	22.5	21.4	1.1	1,539	5,572	28%

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NORWOOD	11,489	9,154	0	2,335	2,066	857.8	842.0	15.8	0.0	43.1	35.6	7.5	2,966	14,455	21%
OAK BLUFFS	1,274	1,039	0	235	314	158.9	158.9	0.0	0.0	1.4	0.0	1.4	474	1,748	27%
OAKHAM	Incomplete Data														NA
ORANGE	3,000	944	0	,	984	249.9	248.0	1.9	0.0	18.6	18.2		1,252	4,252	29%
ORLEANS	2,494	2,246	0	248	968	502.3	502.3	0.0	0.0	144.2	139.7	4.5	1,614	4,108	39%
OTIS	875	875	0	0	249	40.0	40.0	0.0	0.0	7.5	7.4	0.1	297	1,172	25%
OXFORD	6,439	0	6,439	0	0	400.6	400.6	0.0	0.0	0.0	0.0	0.0	401	6,840	6%
PALMER	5,298	0	5,298	0	145	1,306.8	1,301. 2	5.6	0.0	0.0		0.0	1,452	6,750	22%
PAXTON	1,389	1,389	0	0	460	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460	1,849	25%
PEABODY	23,670	23,670	0	0	3,555	1,639.8	1,617. 0	22.8	0.0	94.4	92.6	1.8	5,289	28,959	18%
PELHAM	Did Not Report														NA
PEMBROKE	7,611	7,210	0	401	965	300.0	300.0	0.0	0.0	30.2	29.1	1.1	1,295	8,906	15%
PEPPERELL	4,674	1,051	0	- ,	831	840.0	0.0	0.0	840.0	49.0	49.0	0.0	1,720	6,394	27%
PERU	268	233	0	35	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93	361	26%
PETERSHAM	204	204	0	_	125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	125	329	38%
PHILLIPSTON	254	186	0	68	132	119.9	0.0	0.9	119.0	4.2	3.3		257	511	50%
PITTSFIELD	16,954	16,954	0	0	2,437	847.0	847.0	0.0	0.0	3.1	0.4	2.7	3,287	20,241	16%
PLAINFIELD	115	115	0	_	72	45.2	0.0	3.9	41.2	1.8	1.7	0.1	119	234	51%
PLAINVILLE	3,075	1,331	0	,	765	412.2	397.7	14.5	0.0	11.6			1,189	4,264	28%
PLYMOUTH	24,292	13,719	0	10,573	3,074	1,615.0	1,537. 2	77.8	0.0	226.7	219.8	6.9	4,915	29,207	17%
PLYMPTON	1,127	929	0	198	77	198.7	0.0	0.0	198.7	2.0	2.0	0.0	278	1,405	20%
PRINCETON	Incomp	lete Data													
PROVINCETOWN	1,462	1,462	0	0	721	19.0	18.2	0.8	0.0	66.3	64.3	2.0	806	2,268	36%

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QUINCY	40,666	32,711	0	7,955	5,323	2,580.6	2,568. O	12.6	0.0	219.1	214.0	5.1	8,123	48,789	17%
RANDOLPH	12,553	10,579	0	1,974	2,740	176.6	165.0	11.6	0.0	259.4	255.7	3.8	3,176	15,729	20%
RAYNHAM	3,617	775	0	2,842	629	270.6	270.6	0.0	0.0	30.5	27.8	2.7	930	4,547	20%
READING	8,418	7,997	0	421	1,998	3,650.3	3,621. 0	29.3	0.0	48.9	45.5	3.3	5,697	14,115	40%
REHOBOTH	863	863	0	0	283	75.0	75.0	0.0	0.0	5.5	5.5	0.0	364	1,227	30%
REVERE	22,173	20,420	0	1,753	2,069	764.3	747.5	16.9	0.0	77.3	77.3	0.0	2,911	25,084	12%
RICHMOND	561	561	0	0	181	110.4	0.0	5.4	105.1	0.2	0.0	0.1	292	853	34%
ROCHESTER	2,273	2,273	0	0	362	497.9	496.4	1.5	0.0	27.6	26.5	1.1	886	3,159	28%
ROCKLAND	5,961	5,576	0	385	1,326	420.1	419.0	1.1	0.0	19.6	19.3	0.4	1,766	7,727	23%
ROCKPORT	4,623	2,912	0	1,711	1,229	2,351.3	2,328. 8	22.5	0.0	24.2	24.2	0.0	3,604	8,227	44%
ROWE	270	211	0	59	59	25.3	0.0	0.0	25.3	2.2	2.2	0.0	86	356	24%
ROWLEY	2,857	0	2,857	0	100	6.7	6.4	0.3	0.0	6.1	6.1	0.0	113	2,970	4%
ROYALSTON	275	223	0		216	90.8	0.0	3.3	87.5	9.2	9.2	0.0	316	591	53%
RUSSELL	410	363	0	47	114	123.0	0.0	2.2	120.8	5.4	5.4	0.0	242	652	37%
RUTLAND	Incomplete Data														NA
SALEM	18,244	15,891	0	2,353	1,668	2,682.1	2,676. 8	5.3	0.0	25.0	25.0	0.0	4,375	22,619	19%
SALISBURY	3,561	0	3,561	0	65	738.2	736.7	1.5	0.0	0.6	0.0	0.6	803	4,364	
SANDISFIELD	Did Not Report														NA
SANDWICH	10,777	8,880	0	,	1,540	•	7	0.0	0.0	116.3			4,230	15,007	28%
SAUGUS	10,065	8,807	0	1,258	2,200	3,006.1	3,000. 0	6.1	0.0	44.2	42.4	1.9	5,250	15,315	34%
SAVOY	314	88	0	226	51	49.8	0.0	0.5	49.4	0.1	0.0	0.1	101	415	24%

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SCITUATE	5,769	3,449	0	2,320	2,749	2,108.8	2,000. 0	108.8	0.0	71.1	68.5	2.6	4,928	10,697	46%
SEEKONK	2,915	2,915	0	0	1,650	882.3	870.1	12.2	0.0	30.8	30.8	0.0	2,563	5,478	47%
SHARON	5,929	5,929	0	0	1,327	685.2	685.2	0.0	0.0	7.7	2.7	5.0	2,020	7,949	25%
SHEFFIELD	1,269	734	0	535	396	242.9	0.0	0.0	242.9	17.9	17.7	0.3	657	1,926	34%
SHELBURNE	412	330	0	82	169	0.0	0.0	0.0	0.0	4.4	4.3	0.1	174	586	30%
SHERBORN	1,718	1,718	0	0	898	333.5	0.0	9.6	323.9	17.5	16.5	1.1	1,249	2,967	42%
SHIRLEY	2,778	2,060	0	718	231	12.0	12.0	0.0	0.0	11.2	11.2	0.0	254	3,032	
SHREWSBURY	10,425	9,102	0	1,323	3,474	4,565.3	4,548. 0	17.3	0.0	24.6	24.6	0.0	8,064	18,489	44%
SHUTESBURY	346	346	0	0	198	127.4	0.0	0.0	127.4	0.0	0.0	0.0	325	671	48%
SOMERSET	4,392	3,875	0	517	1,829	2,931.2	2,931. 2	0.0	0.0	16.5	15.6	0.9	4,776	9,168	52%
SOMERVILLE	25,328	25,328	0	0	4,350	1,549.8	1,504. 8	45.0	0.0	300.4	175.4	125.0	6,200	31,528	20%
SOUTH HADLEY	4,734	4,557	0	177	1,428	1,153.8	1,142. 5	11.3	0.0	68.5	66.8	1.8	2,651	7,385	36%
SOUTHAMPTON	811	811	0	0	1,328	3,772.6	3,692. 0	80.6	0.0	136.6	134.9	1.6	5,237	6,048	87%
SOUTHBOROUGH	3,691	3,691	0	0	950	442.0	442.0	0.0	0.0	9.6		5.6	1,402	5,093	
SOUTHBRIDGE	8,771	5,670	0	3,101	1,299	418.8	411.2	7.6	0.0	6.3	0.0	6.3	1,724	10,495	16%
SOUTHWICK	2,597	2,597	0	0	619	1,527.5	1,400. 0	127.5	0.0	38.9	37.6	1.3	2,185	4,782	46%
SPENCER	4,662	1,809	0	2,853	730	122.2	107.0	15.2	0.0	23.2	23.2	0.0	876	5,538	16%
SPRINGFIELD	65,295	49,259	0	16,036	4,637	11,087.4	.0	81.4	0.0	72.6			15,797	81,092	19%
STERLING	2,458	2,328	0	130	852	404.6	398.8	5.8	0.0	34.8	34.8	0.0	1,292	3,750	34%
STOCKBRIDGE	1,349	1,146	0	203	609	133.0	0.0	0.0	133.0	11.2	10.9	0.3	753	2,102	36%

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STONEHAM	9,475	8,441	0	1,034	1,536	2,556.8	2,553. 0	3.8	0.0	87.1	87.1	0.0	4,180	13,655	31%
STOUGHTON	10,327	9,361	0	966	918	2,723.9	2,723. 9	0.0	0.0	59.8	59.8	0.0	3,702	14,029	26%
STOW	Did Not Report														NA
STURBRIDGE	1,781	1,781	0	0	607	459.4	450.0	9.4	0.0	38.5	38.5	0.0	1,105	2,886	38%
SUDBURY	3,261	3,261	0	0	2,281	319.8	312.0	7.8	0.0	76.1	76.1	0.0	2,677	5,938	45%
SUNDERLAND	570	570	0	0	278	265.1	0.0	0.0	265.1	1.6	1.5	0.1	545	1,115	49%
SUTTON	2,838	538	0	2,300	369	87.8	85.6	2.2	0.0	10.3	10.3	0.0	467	3,305	14%
SWAMPSCOTT	5,322	5,322	0	0	1,248	508.1	508.0	0.1	0.0	13.9	12.5	1.4	1,770	7,092	25%
SWANSEA	3,523	3,242	0	281	1,238	865.6	844.0	21.6	0.0	48.5	41.6	6.8	2,152	5,675	38%
TAUNTON	17,973	14,172	0	3,801	4,500	238.1	237.5	0.6	0.0	169.6	167.7	1.9	4,907	22,880	21%
TEMPLETON	2,536	2,536	0	0	1,000	8.5	8.2	0.4	0.0	1.5	1.0		1,010	3,546	28%
TEWKSBURY	11,826	11,826	0	0	1,541	901.0	899.0	2.0	0.0	46.0	46.0	0.0	2,488	14,314	17%
TISBURY	Did Not Report														NA
TOLLAND	320	79	0	241	43	0.6	0.0	0.6	0.0	0.3	0.3	0.0	44	364	12%
TOPSFIELD	2,082	2,082	0	0	914	2,156.6	2,156. 6	0.0	0.0	1.1	0.0	1.1	3,072	5,154	60%
TOWNSEND	3,526	3,526	0	0	799	661.9	0.0	1.8	660.1	6.7	6.7		1,467	4,993	29%
TRURO	1,687	1,687	0	0	906	433.2	423.8	9.4	0.0	61.5	60.3	1.2	1,401	3,088	45%
TYNGSBOROUGH	4,218	4,100	0	118	1,244	119.0	113.2	5.8		13.7	13.7		1,377	5,595	25%
TYRINGHAM	307	132	0	175	65	0.0	0.0	0.0	0.0	3.0	3.0	0.0	68	375	18%
UPTON	Did Not Report														NA
UXBRIDGE	Incomplete Data														NA
WAKEFIELD	9,770	9,770	0	0	1,992	5,599.6	5,595. 8	3.8	0.0	36.4	33.6	2.8	7,628	17,398	44%

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WALES	736	314	0	422	106	128.5	0.2	0.0	128.4	13.8	13.8		248	984	25%
WALPOLE	9,037	7,900	0	1,137	2,004	3,692.1	3,659. 2	32.9	0.0	25.4	21.6	3.8	5,721	14,758	39%
WALTHAM	20,959	20,959	0	0	3,308	792.1	792.1	0.0	0.0	103.8	98.0	5.8	4,204	25,163	17%
WARE	Incomp	lete Data													
WAREHAM	15,043	5,516	0	9,527	790	1,668.2	0.0	7.5	1,660.7	2.3	2.3	0.0	2,460	17,503	14%
WARREN	2,476	1,210	0	1,266	217	7.6	7.6	0.0	0.0	5.8	3.8	2.0	230	2,706	8%
WARWICK	154	154	0	0	75	52.7	0.0	0.0	52.7	4.5	4.5	0.0	132	286	46%
WASHINGTON	158	158	0	0	75	39.2	0.0	0.9	38.2	8.6	8.6	0.0	123	281	44%
WATERTOWN	11,873	11,847	0	26	2,152	1,359.5	1,347. 8	11.6	0.0	123.5	121.7	1.8	3,635	15,508	23%
WAYLAND	Did Not Report														NA
WEBSTER	7,088	265	0	6,823	662	1,120.0	0.0	0.0	1,120.0	24.3	24.3		1,806	8,894	20%
WELLESLEY	6,674	5,292	0	1,382	3,949	8,650.0	8,650. 0	0.0	0.0	311.8	308.2	3.6	12,911	19,585	66%
WELLFLEET	2,157	2,157	0	0	405	577.8	574.0	3.8	0.0	72.4	68.5	3.9	1,055	3,212	33%
WENDELL	211	205	0	6	108	69.0	0.0	0.0	69.0	3.9	3.8	0.1	181	392	46%
WENHAM	1,327	1,327	0	0	469	0.0	0.0	0.0	0.0	0.4	0.0	0.4	469	1,796	26%
WEST BOYLSTON	2,000	2,000	0	0	556	46.3	44.1	2.3	0.0	11.9	11.9	0.0	614	2,614	23%
WEST BRIDGEWATER	2,692	2,692	0		401	151.7	151.6	0.1	0.0	21.3		0.0	574	3,266	18%
WEST BROOKFIELD	1,860	0	1,860	0	21	101.6		0.0	0.0	15.6			138	1,998	7%
WEST NEWBURY	1,915	1,915	0	0	381	317.0	0.0	0.0	317.0	1.3			699	2,614	27%
WEST SPRINGFIELD	11,162	8,473	0	_,,	2,869		0	16.5	0.0	71.7			6,197	17,359	
WEST STOCKBRIDGE	479	427	0	<i>52</i>	219	107.7	0.8	1.9	105.0	4.1	3.9	0.2	331	810	41%

Column A: Municipality	Column B: Total Tons Disposed (Column C or D + Column E if applicable)	Column C: Reported Disposal Tonnage	Column D: Default Disposal Estimate (when no disposal tonnage reported)	Column E: Residential Subscription Hauler Disposal Tonnage (estimated disposal for residents not served by a municipal program)	Column F: Total Tons Recycled (Paper, glass, plastic, metal, textiles, swap shop)	Column G: Total Tons Composted (Column H+I+J)	Column H: Tons of Leaf & Yard Waste and Christmas Trees Collected	Column I: Home Compost Bin Credit (Tons)	Column J: Default Compost Program Credit (Education, Enforcement and/or Pick- up/Drop-off	Column K: Tons Hazardous Products and Difficult to Manage Wastes (Columns L+M)	Column L: Tons Hazardous Products & Difficult to Manage Waste Collected	Column M: Tons Hazardous Products Collected at One-Day Events	Column N: Total Tons Diverted (Columns F+G+K)	Column O: Tons Generated (Sum of Disposal & Total Diversion) (Columns B+N)	Column P: Recycling Rate (Total Tons Diverted/ Tons Generated) (Column N/Column 0)
WEST TISBURY	1,493	1,493	0	0	362	61.0	61.0	0.0	0.0	1.6		1.6	425	1,918	22%
WESTBOROUGH	5,471	5,471	0	0	1,239	1,278.0	1,248. 0	30.0	0.0	44.6	40.9	3.7	2,562	8,033	32%
WESTFIELD	19,418	15,179	0	4,239	4,749	2,085.6	2,044. 0	41.6	0.0	112.6	111.1	1.5	6,947	26,365	26%
WESTFORD	9,995	9,375	0	620	5,174	60.7	49.6	11.1	0.0	25.9	23.2	2.7	5,261	15,256	34%
WESTHAMPTON	346	346	0	0	149	111.0	0.0	8.3	102.8	8.9	8.7	0.2	269	615	44%
WESTMINSTER	Did Not Report														NA
WESTON	3,952	2,298	0	1,654	1,033	497.0	497.0	0.0	0.0	34.1	31.6	2.6	1,564	5,516	28%
WESTPORT	4,422	4,422	0	0	1,785	56.2	33.4	22.8	0.0	24.9	24.9	0.0	1,866	6,288	30%
WESTWOOD	5,957	5,504	0	453	1,585	476.0	474.0	2.0	0.0	3.2	0.0	3.2	2,065	8,022	26%
WEYMOUTH	24,373	20,827	0	3,546	7,249	3,929.3	3,922. 4	6.9	0.0	163.5	152.3	11.2	11,342	35,715	32%
WHATELY	167	167	0	_	137	119.4	10.0	0.0	109.4	4.0	4.0	0.0	260	427	61%
WHITMAN	5,774	4,987	0		927	132.0	132.0	0.0	0.0	32.9	31.5	1.4	1,092	6,866	16%
WILBRAHAM	4,452	1,049	0	3,403	1,194	2,095.6	2,093. 6	2.0	0.0	18.3	15.7	2.6	3,308	7,760	43%
WILLIAMSBURG	577	577	0	0	338	11.7	3.1	8.6	0.0	3.5	3.1	0.5	353	930	38%
WILLIAMSTOWN	3,884	3,884	0	_	993	568.2	565.5	2.7	0.0	17.0	16.7	0.3	1,579	5,463	29%
WILMINGTON	10,054	10,054	0	0	1,346	3,888.4	3,888. 0	0.4	0.0	35.0	32.5	2.4	5,269	15,323	34%
WINCHENDON	3,134	549	0	2,585	420	194.8	191.0	3.8	0.0	24.9	24.9	0.0	640	3,774	17%
WINCHESTER	12,352	11,202	0	1,150	2,194	2,787.0	2,787. 0	0.0	0.0	97.0	91.5	5.5	5,078	17,430	29%
WINDSOR	213	206	0	7	111	61.7	0.0	0.4	61.3	2.7	2.5	0.2	176	389	45%
WINTHROP	5,622	5,622	0	0	971	283.0	208.0	75.0	0.0	20.9	20.9	0.0	1,275	6,897	18%
WOBURN	19,449	15,905	0	3,544	1,741	4,899.0	4,891.	8.0	0.0	67.7	67.6	0.2	6,708	26,157	26%

Column A: Municipality	Column B: Total Tons Disposed (Column C or D + Column E if applicable)	Column C: Reported Disposal Tonnage	Column D: Default Disposal Estimate (when no disposal tonnage reported)	Column E: Residential Subscription Hauler Disposal Tonnage (estimated disposal for residents not served by a municipal program)	Column F: Total Tons Recycled (Paper, glass, plastic, metal, textiles, swap shop)	Column G: Total Tons Composted (Column H+I+J)	Column H: Tons of Leaf & Yard Waste and Christmas Trees Collected	Column I: Home Compost Bin Credit (Tons)	Column J: Default Compost Program Credit (Education, Enforcement and/or Pick-up/Drop-off	Column K: Tons Hazardous Products and Difficult to Manage Wastes (Columns L+M)	Column L: Tons Hazardous Products & Difficult to Manage Waste Collected	Column M: Tons Hazardous Products Collected at One-Day Events	Column N: Total Tons Diverted (Columns F+G+K)	Column O: Tons Generated (Sum of Disposal & Total Diversion) (Columns B+N)	Column P: Recycling Rate (Total Tons Diverted/ Tons Generated) (Column N/Column O)
							0								
WORCESTER	35,079	23,189	0	11,890	9,496	16,624.4	16,595 .0	29.4	0.0	136.5	132.3	4.2	26,256	61,335	43%
WORTHINGTON	271	271	0	0	164	94.3	0.0	5.4	88.9	5.5	5.3	0.2	264	535	49%
WRENTHAM	3,139	2,998	0	141	1,472		235.0	0.0	0.0	4.1	0.0	4.1	1,711	4,850	35%
YARMOUTH	15,785	8,794	0	6,991	2,336	6,223.1	6,211. 8	11.3	0.0	134.1	126.9	7.3	8,693	24,478	36%

Draft

Appendix C
2008 Residential Solid Waste and Recycling Program Information by Municipality

Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
ABING TO N	Southeast	16,000	4,310	4,310	Curbside	Curbside	No	No
ACTON	C entral	21,000	7,000	3,921	Drop-off	Drop-off	Yes	N o
ACUSHNET	Southeast	11,000	4,472	4,500	Curbside	Curbside	No	N o
ADAMS	W estern	8,809	3,992	NA	Subscription	Drop-off	No	N o
AG AW AM	W estern	28,528	11,643	8,832	Curbside	Curbside	No	N o
ALFORD	W estern	425	305	175	Drop-off	Drop-off	Yes	N o
AMESBURY	Northeast	17,000	5,157	5,157	Curbside	Curbside	No	No
AMHERST	W estern	34,874	8,577	N A	Subscription	Subscription	Yes	Yes
ANDOVER	Northeast	32,086	10,312	8,767	Curbside	Curbside	No	No
AQUINNAH	Southeast	344	344	172	Drop-off	Drop-off	No	Yes
ARLINGTON	Northeast	41,224	19,496	19,496	Curbside	Curbside	No	No
ASHBURNHAM	C entral	6,043	2,709	100	Drop-off	Drop-off	No	No
ASHBY	C entral	2,845	1,100	300	Drop-off	Drop-off	No	Yes
ASHFIELD	W estern	1,800	750	750	Drop-off	Drop-off	No	Yes
ASHLAND	Northeast	16,000	6,740	5,590	Curbside	Curbside	Yes	Yes
ATHOL	W estern	11,500	4,824	867	Drop-off	Drop-off	No	Yes
ATTLEBORO	Southeast	42,000	14,573	13,532	Curbside	Curbside	Yes	Yes
AUBURN	C entral	15,699	6,031	4,968	Curbside	Curbside	Yes	N o
AVON	Southeast	4,000	1,965	N A	Curbside	Curbside	No	No
AYER	C entral	6,137	3,131	1,391	Drop-off	Drop-off	Yes	Yes
BARNSTABLE	Southeast	50,000	20,854	8,693	Drop-off	Drop-off	Yes	No
BARRE	C entral	5,328	2,182	1,450	Drop-off	Drop-off	Yes	Yes
BECKET	W estern	1,900	700	700	Drop-off	Drop-off	Yes	Yes
BEDFORD	Northeast	13,146	4,621	4,621	Curbside	Curbside	No	No
BELCHERTO W N	W estern	14,500	6,595	1,814	Drop-off	Drop-off	Yes	Yes
BELLING HAM	C entral	16,000	5,600	5,000	Curbside	Curbside	Yes	N o
BELMO NT	Northeast	25,000	11,000	11,000	Curbside	Curbside	No	N o

				Households Served by			Solid	Pay-
	MassDEP		Total	Municipal Disposal	Disposal	Recycling	Waste Flat	as- you-
Municipality	Region	Population	Households	Program	Service	Service	Fee	throw
BERKLEY	Southeast	6,500	2,500	1,050	Drop-off	Drop-off	Yes	Yes
BERLIN	C entral	2,348	1,253	N A	Drop-off	Drop-off	No	No
BERNARDSTON	W estern	2,157	780	670	Drop-off	Drop-off	No	Yes
BEVERLY	N ortheast	41,500	16,000	13,081	Curbside	Curbside	Yes	N o
BILLERICA	N ortheast	39,981	12,349	10,949	Curbside	Curbside	No	N o
BLACKSTONE	C entral	8,922	3,400	3,400	Curbside	Curbside	No	N o
BLANDFORD	W estern	1,250	400	N A	Drop-off	Drop-off	Yes	N o
BOLTON	C entral	5,152	1,717	1,657	Drop-off	Drop-off	No	Yes
BOSTON	Northeast	623,351	275,098	275,098	Curbside	Curbside	No	N o
BOURNE	Southeast	20,277	7,814	7,814	Curbside	Curbside	No	N o
BO XBO ROUGH	Central	4,600	2,000	1,585	Drop-off	D rop-off	No	N o
BOXFORD	N ortheast	8,862	2,742	2,604	Curbside	Curbside	No	Yes
BOYLSTON	Central	4,200	1,653	NA	Subscription	Subscription	No	N o
BRAINTREE	Southeast	33,300	10,405	10,000	Curbside	Curbside	Yes	N o
BREWSTER	Southeast	11,000	5,662	3,670	Drop-off	Drop-off	Yes	N o
BRIDGEWATER	Southeast	25,185	10,400	NA	Drop-off	Drop-off	No	Yes
BRIMFIELD	W estern	3,339	1,410	N A	Drop-off	Subscription	No	Yes
BROCKTON	Southeast	98,000	32,850	26,500	Curbside	Curbside	Yes	Yes
BROOKFIELD	C entral	3,200	1,256	505	Drop-off	Drop-off	Yes	Yes
BROOKLINE	Northeast	55,400	25,605	13,260	Curbside	Curbside	Yes	N o
BUCKLAND	W estern	1,998	750	675	Drop-off	Drop-off	No	Yes
BURLINGTON	N ortheast	23,000	7,700	7,700	Curbside	Curbside	No	No
C A MBR ID G E	Northeast	101,355	47,959	34,493	Curbside	Curbside	No	No
CANTON	Southeast	20,100	7,026	7,026	Curbside	Curbside	No	N o
CARLISLE	Northeast	5,539	1,669	1,661	Drop-off	Drop-off	Yes	No
CARVER	Southeast	11,843		N A	Subscription	Subscription	No	No
CHARLEMONT	W estern	1,391	500	500	Drop-off	Drop-off	No	Yes
CHARLTON	C entral	14,000	4,000	N A	Subscription	Subscription	No	No
CHATHAM	Southeast	6,800	6,743	4,422	Drop-off	Drop-off	Yes	No
CHELMSFORD	Northeast	33,000	12,700	12,700	Curbside	Curbside	No	No
CHELSEA	Northeast	35,088	11,326	10,468	Curbside	Curbside	Yes	N o

Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
CHESHIRE	W estern	3,400	1,200	1,000	Drop-off	Drop-off	Yes	Yes
CHESTER	W estern	1,200	559	500	Drop-off	Drop-off	No	Yes
CHESTERFIELD	W estern	1,201	450	450	Drop-off	Drop-off	No	Yes
CHICOPEE	W estern	54,992	23,117	17,881	Curbside	Curbside	No	N o
CHILMARK	Southeast	843	843	400	Drop-off	Drop-off	No	Yes
CLARKSBURG	W estern	1,600	657	NA	Drop-off	Drop-off	No	No
CLINTON	C entral	13,435	5,597	NA	Curbside	Drop-off	No	Yes
COHASSET	Southeast	7,617	2,809	2,477	Drop-off	Drop-off	Yes	Yes
COLRAIN	W estern	1,799	623	603	Drop-off	Drop-off	No	Yes
CONCORD	Northeast	17,000	5,100	3,197	Curbside	Curbside	Yes	Yes
CONWAY	W estern	1,809	560	545	Drop-off	Drop-off	No	N o
C U MMIN G TO N	W estern	978	375	375	Drop-off	Drop-off	Yes	No
DALTON	W estern	7,200	2,328	1,874	Drop-off	Drop-off	No	Yes
DANVERS	Northeast	25,700	11,800	8,000	Curbside	Curbside	No	N o
DARTMO UTH	Southeast	35,570	11,946	10,092	Curbside	Curbside	Yes	Yes
DEDHAM	Northeast	24,046	8,892	7,808	Curbside	Curbside	No	No
DEERFIELD	W estern	4,750	2,000	1,700	Drop-off	Drop-off	Yes	Yes
DENNIS	Southeast	16,000	10,000	7,245	Drop-off	Drop-off	Yes	No
DIG H T O N	Southeast	7,376	2,257	2,257	Curbside	Curbside	No	Yes
DOUGLAS	Central	8,444	2,984	1,350	Drop-off	Drop-off	Yes	N o
DOVER	N ortheast	5,987	1,976	1,976	Drop-off	Drop-off	No	N o
DRACUT	N ortheast	29,399	11,200	10,712	Curbside	Curbside	No	N o
DUDLEY	C entral	11,000	4,000	700	Drop-off	Drop-off	Yes	N o
DUNSTABLE	C entral	3,200	1,000	591	Drop-off	Drop-off	No	N o
DUXBURY	Southeast	15,330	5,700	4,400	Drop-off	Drop-off	Yes	Yes
EAST BRIDGEWATER	Southeast	14,060	5,043	5,043	Curbside	Curbside	No	Yes
EAST BROOKFIELD	Central	2,106	1,046	1,014	Curbside	Curbside	Yes	Yes
EAST LONG MEADOW	W estern	15,800	5,200	5,200	Curbside	Curbside	No	Yes
EASTHAM	Southeast	5,400	3,878	3,559	Drop-off	Drop-off	Yes	No
EASTHAMPTON	W estern	16,200	7,400	N A	Subscription	Subscription	No	N o
EASTON	Southeast	23,300	8,700	2,700	Curbside	Curbside	Yes	N o

				Households				
				Served by			Solid	Pay-
	MassDEP		Total	Municipal Disposal	Disposal	Recycling	Waste Flat	as- you-
Municipality	Region	Population	Households	Program	Service	Service	Fee	throw
EDGARTOWN	Southeast	15,000	4,000	2,000	Drop-off	Drop-off	No	Yes
E G R E MO N T	W estern	1,036	803	738	Drop-off	Drop-off	No	N o
ERVING	W estern	1,464	515	515	Curbside	Curbside	No	No
ESSEX	N ortheast	3,300	1,385	1,300	Drop-off	Drop-off	Yes	N o
EVERETT	Northeast	38,500	16,500	13,644	Curbside	Curbside	No	N o
FAIRHAVEN	Southeast	16,400	6,060	5,610	Curbside	Curbside	No	N o
FALL RIVER	Southeast	92,760	35,000	30,000	Curbside	Curbside	No	N o
FALMO UTH	Southeast	35,000	20,000	20,000	Curbside	Curbside	No	N o
FITCHBURG	C entral	39,000	13,400	10,086	Curbside	Curbside	No	N o
FLORIDA	W estern	700	225	225	Drop-off	Drop-off	Yes	N o
FO XBOROUGH	Southeast	16,853	5,469	3,773	Curbside	Curbside	Yes	Yes
FRAMING HAM	N ortheast	67,000	26,153	26,003	Curbside	Curbside	No	No
FRANKLIN	C entral	32,558	11,379	8,459	Curbside	Curbside	Yes	No
FREETOWN	Southeast	8,800	3,138	2,578	Curbside	Drop-off	Yes	N o
GARDNER	C entral	21,000	8,200	7,160	Curbside	Curbside	Yes	Yes
G E O R G E T O W N	N ortheast	7,400	2,458	N A	Subscription	Subscription	No	Yes
GILL	W estern	1,363	540	540	Curbside	Curbside	No	Yes
GLOUCESTER	N ortheast	30,273	13,799	12,300	Curbside	Curbside	No	Yes
GOSHEN	W estern	921	375	375	Drop-off	Drop-off	No	Yes
GOSNOLD	Southeast	96	150	NA	Curbside	Curbside	No	Yes
GRAFTON	C entral	15,914	5,669	5,669	Curbside	Curbside	No	Yes
GRANBY	W estern	6,400	2,162	2,162	Drop-off	Drop-off	Yes	N o
GRANVILLE	W estern	1,503	615	530	Drop-off	Drop-off	No	Yes
GREAT BARRING TO N	W estern	7,700	1,900	N A	Drop-off	Drop-off	No	Yes
GREENFIELD	W estern	18,168	7,500	7,500	Curbside	Curbside	No	Yes
GROTON	C entral	10,500	2,994	1,325	Drop-off	Drop-off	Yes	Yes
GROVELAND	N ortheast	6,200	900	N A	Curbside	Curbside	No	N o
HADLEY	W estern	4,117	2,106	N A	Drop-off	Drop-off	No	Yes
HALIFAX	Southeast	7,700	2,936	1,820	Curbside	Curbside	No	Yes
H A MIL TO N	N ortheast	8,374	2,571	2,551	Curbside	Curbside	No	Yes
HAMPDEN	W estern	5,143	1,834	754	Drop-off	Drop-off	Yes	Yes

Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
HANCOCK	W estern	721	260	260	Drop-off	Drop-off	No	No
HANOVER	Southeast	14,000	4,700	4,700	Drop-off	Drop-off	No	No
HANSON	Southeast	9,689	3,432	3,015	Drop-off	Drop-off	No	No
HARDWICK	W estern	3,000	990	N A	Subscription	Drop-off	No	No
HARVARD	C entral	5,800	1,950	1,350	Drop-off	Drop-off	Yes	No
HARW ICH	Southeast	12,529	9,512	9,465	Drop-off	Drop-off	Yes	No
HATFIELD	W estern	3,400	1,250	N A	Drop-off	Drop-off	No	Yes
HAVERHILL	Northeast	61,000	21,500	21,500	Curbside	Curbside	No	No
HAWLEY	W estern	336	100	N A	Subscription	Subscription	No	No
HEATH	W estern	797	250	225	Drop-off	Drop-off	Yes	No
H IN G H A M	Southeast	20,500	8,496	8,496	Drop-off	Drop-off	No	No
HINSDALE	W estern	1,889	739	444	Drop-off	Drop-off	Yes	No
HOLBROOK	Southeast	10,785	3,630	3,242	Curbside	Curbside	No	Yes
HOLDEN	C entral	17,550	6,192	5,375	Curbside	Curbside	Yes	No
HOLLAND	W estern	2,280	888	N A	Subscription	Subscription	No	No
HOLLISTON	C entral	14,893	4,826	4,417	Curbside	Curbside	Yes	Yes
HOLYOKE	W estern	40,167	16,917	16,197	Curbside	Curbside	No	No
HOPEDALE	C entral	6,350	2,265	2,230	Curbside	Curbside	No	No
HOPKINTON	C entral	15,000	5,003	5,003	Curbside	Curbside	No	No
HUBBARDSTON	C entral	4,606	1,430	N A	Subscription	Subscription	No	No
HUDSON	C entral	18,437	6,990	3,495	Drop-off	Drop-off	Yes	Yes
HULL	Southeast	11,738	5,893	N A	Subscription	Drop-off	No	No
HUNTING TO N	W estern	2,174	895	675	Drop-off	Drop-off	No	Yes
IPS W IC H	Northeast	13,708	5,367	5,367	C urbside	Curbside	No	No
KINGSTON	Southeast	12,000	4,400	2,888	Drop-off	Drop-off	Yes	No
LAKEVILLE	Southeast	10,000	4,266	1,679	Drop-off	Drop-off	No	Yes
LANCASTER	C entral	7,000	2,500	N A	Subscription	Drop-off	No	No
LANESBOROUGH	W estern	2,990	1,203	N A	Subscription	Drop-off	No	No
LAWRENCE	Northeast	72,043	26,741	N A	Curbside	Curbside	No	No
LEE	W estern	5,850	2,442	N A	Subscription	Subscription	No	No
LEICESTER	C entral	10,300	3,458	N A	Subscription	Drop-off	No	No

				Households Served by Municipal			Solid Waste	Pay-
	MassDEP		Total	Disposal	Disposal	Recycling	Flat	you-
Municipality	Region	Population	Households	Program	Service	Service	Fee	throw
LENOX	W estern	5,807	3,093	N A	Subscription	Subscription	N o	No
LEO MINSTER	Central	42,000	16,976	12,028	Curbside	Curbside	N o	No
LEVERETT	W estern	1,890	660	600	Drop-off	Drop-off	Yes	Yes
LEXING TO N	N ortheast	29,959	11,638	11,638	Curbside	Curbside	N o	N o
LEYDEN	W estern	683	282	N A	Subscription	Subscription	N o	N o
LINCOLN	N ortheast	5,780	2,180	1,948	Drop-off	Drop-off	N o	No
LITTLETON	C entral	8,255	3,600	2,117	Drop-off	D rop-off	Yes	No
LONG MEADOW	W estern	15,500	5,474	5,474	Curbside	Curbside	No	Yes
LOWELL	N ortheast	105,167	35,636	N A	Curbside	Curbside	Yes	No
LUDLOW	W estern	21,481	6,700	6,700	Curbside	Curbside	No	No
LUNENBURG	C entral	10,000	3,800	3,200	Curbside	Curbside	N o	Yes
LYNN	N ortheast	90,000	32,000	32,000	Curbside	Curbside	No	No
LYNNFIELD	N ortheast	12,100	4,250	4,250	Curbside	Curbside	No	No
MALDEN	N ortheast	56,688	22,496	18,283	Curbside	Curbside	N o	Yes
MANCHESTER	N ortheast	5,575	2,122	N A	Curbside	Curbside	N o	Yes
MANSFIELD	Southeast	23,100	7,460	6,576	Curbside	Curbside	N o	No
MARBLEHEAD	N ortheast	20,240	8,400	7,200	Curbside	Curbside	N o	No
MARIO N	Southeast	5,697	2,500	2,500	Curbside	Curbside	N o	No
MARLBOROUGH	C entral	36,000	14,338	12,500	Curbside	Curbside	N o	No
MARSHFIELD	Southeast	25,000	10,000	9,260	Curbside	Curbside	Yes	Yes
MASHPEE	Southeast	12,296	5,256	3,903	Drop-off	Drop-off	Yes	No
MATTAPO IS ETT	Southeast	6,500	4,400	4,400	Curbside	Curbside	N o	No
MAYNARD	C entral	10,592	3,930	3,775	Curbside	Curbside	No	Yes
MEDFIELD	C entral	12,836	4,500	4,000	Drop-off	Drop-off	Yes	No
MEDFORD	N ortheast	54,407	15,723	14,037	Curbside	Curbside	N o	No
MEDWAY	C entral	14,000	4,353	3,759	Curbside	Curbside	Yes	Yes
MELROSE	Northeast	27,086	11,667	8,844	Curbside	Curbside	Yes	No
MENDON	C entral	6,329	1,800	N A	Curbside	Curbside	Yes	No
MERRIMAC	Northeast	6,300	2,444	2,020	Curbside	Curbside	N o	Yes
METHUEN	Northeast	41,731	15,000	12,857	Curbside	Curbside	N o	No
MID D L E B O R O U G H	Southeast	21,000	8,222	6,419	Curbside	Curbside	Yes	No

	MassDEP	Bandallan	Total	Households Served by Municipal Disposal	Disposal	Recycling	Solid Waste Flat	Pay- as- you-
Municipality	Region	Population	Households	Program	Service	Service	Fee	throw
MIDDLEFIELD	Western	542	175	175	Drop-off	Drop-off	Yes	No
MIDDLETON	Northeast	5,055	2,745	1,479	Drop-off	Drop-off	Yes	N o
MILFORD	Central	28,500	10,000	8,900	Curbside	Curbside	No	No
MILLBURY	Central	12,784	4,201	3,000	Drop-off	Drop-off	Yes	No
MILLIS	Central	8,126	3,157	1,067	Drop-off	Drop-off	Yes	Yes
MILLVILLE	Central	3,100	1,100	1,100	Curbside	Curbside	N o	No Yes
MIL TO N MONROE	N ortheast W estern	26,272 98	9,800	9,800	Curbside Curbside	Curbside	N o N o	Yes
			35	N A		Curbside		No
MONTAGUE	Western	8,400	2,800	NA 2 704	Curbside	Curbside	Yes	No
MONTAGUE	W estern W estern	8,489	3,784	3,784	Curbside	Curbside	No	Yes
MONTEREY MONTGOMERY		1,024	636 310	553	Drop-off	Drop-off	Yes	No
MOUNT WASHING TON	W estern W estern	800 144	70	N A	Subscription Drop-off	Curbside Drop-off	N o N o	N o N o
NAHANT	N ortheast	3,975	1,600	N A	Curbside	Curbside	Yes	N O
NANTUCKET	Southeast	10,000	7,000	7,000	Drop-off	Drop-off	N o	N O
NATICK	N ortheast	33,000	8,295	8,295	Curbside	Curbside	N o	Yes
NEEDHAM	N ortheast	31,097	9,653	6,807	Drop-off	Drop-off		Yes
NEW ASHFORD	W estern	247	9,055	0,807 N A	Subscription	Drop-off	Yes No	N o
NEW BEDFORD	Southeast	93,768	38,178	33,674	Curbside	C urbside	N o	No
NEW BRAINTREE	Central	1,000	30,170	33,074 NA	Subscription	Subscription	N o	No
NEW MARLBOROUGH	Western	1,500	1,012	330	Subscription	Drop-off	Yes	No
NEW SALEM	Western	929	450	445	Drop-off	Drop-off	Yes	Yes
NEWBURY	Northeast	6,900	3,200	1,600	Drop-off	Drop-off	Yes	N o
NEWBURYPORT	Northeast	17,189	7,936	7,936	Curbside	Curbside	N o	No
NEWTON	Northeast	81,000	30,593	28,593	Curbside	Curbside	N o	No
NORFOLK	Central	9,396	3,030		Drop-off	Drop-off	Yes	Yes
NORTH ADAMS	Western	14,670	7,535	1,425	Drop-off	Drop-off	Yes	Yes
NORTH ANDOVER	Northeast	30,145	9,896	8,269	Curbside	Curbside	N o	N o
NORTH ATTLEBOROUGH	Southeast	27,445	10,000	8,810	Curbside	Curbside	Yes	Yes
NORTH BROOKFIELD	Central	4,691	1,677	1,225	Drop-off	Drop-off	Yes	Yes
NORTH READING	Northeast	14,000	4,200	4,200	Curbside	Curbside	Yes	N o
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Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
NORTHAMPTON	Western	30,842	11,880	6,155	Drop-off	Drop-off	No	Yes
NORTHBOROUGH	C entral	14,129	5,009	4,244	Curbside	Curbside	N o	Yes
NORTHBRIDGE	C entral	13,914	6,314	N A	Subscription	Subscription	N o	N o
NORTHFIELD	W estern	2,951	1,257	1,057	Drop-off	Drop-off	Yes	Yes
NORTON	Southeast	18,026	5,617	N A	Subscription	Subscription	No	N o
NORWELL	Southeast	10,377	3,400	3,400	Curbside	Curbside	No	N o
NORWOOD	Southeast	28,326	11,500	9,241	Curbside	Curbside	No	N o
OAK BLUFFS	Southeast	4,227	4,027	3,800	Curbside	Drop-off	No	Yes
OAKHAM	C entral	2,000	650	N A	Subscription	Subscription	No	No
ORANGE	W estern	7,518	4,000	1,500	Drop-off	Drop-off	Yes	Yes
ORLEANS	Southeast	6,415	3,619	3,379	Drop-off	Drop-off	Yes	No
O T IS	W estern	1,400	1,400	1,400	Drop-off	Drop-off	Yes	No
OXFORD	C entral	12,666	5,642	N A	Subscription	Subscription	No	No
PALMER	W estern	12,500	4,500	N A	Subscription	Drop-off	No	N o
PAXTON	C entral	6,000	1,762	1,762	Curbside	Curbside	No	No
PEABODY	Northeast	48,129	18,581	18,581	Curbside	Curbside	No	N o
PELHAM	W estern	1,404	554	N A	Subscription	Drop-off	No	N o
PE MBR O KE	Southeast	18,900	6,421	6,033	Curbside	Drop-off	Yes	N o
PEPPERELL	Central	12,000	5,305	1,800	Drop-off	Drop-off	Yes	Yes
PERU	W estern	850	365	365	Drop-off	Drop-off	Yes	No
PETERSHAM	W estern	1,300	525	326	Drop-off	Drop-off	Yes	Yes
PHILLIPS TO N	C entral	1,700	738	738	Drop-off	Drop-off	No	Yes
PITTSFIELD	W estern	41,000	16,000	16,000	Curbside	Curbside	No	No
PLAINFIELD	W estern	589	175	175	Drop-off	Drop-off	No	Yes
PLAINVILLE	Southeast	8,100	3,395	1,708	Curbside	Curbside	Yes	Yes
PLYMO UTH	Southeast	52,266	20,923	10,696	Drop-off	Drop-off	Yes	No
PLYMPTO N	Southeast	2,839	961	769	Drop-off	Drop-off	Yes	No
PRINCETON	Central	3,683	1,400	N A	Subscription	Subscription	No	No
PRO VINCETO W N	Southeast	3,400	4,791	3,408	Curbside	Curbside	No	No
QUINCY	Northeast	90,000	38,000	30,305	Curbside	Curbside	No	No
RANDOLPH	Southeast	31,000	9,500	7,591	Curbside	Curbside	Yes	No

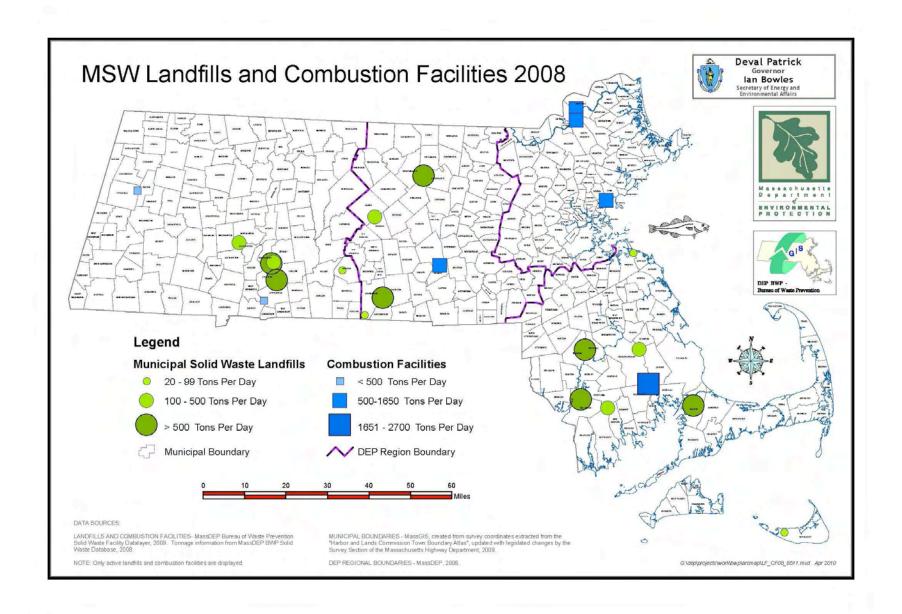
Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
RAYNHAM	Southeast	12,593	4,240	1,491	Drop-off	Drop-off	N o	Yes
READING	Northeast	23,800	8,436	8,019	Curbside	Curbside	N o	No
REHOBOTH	Southeast	11,396	4,053	1,330	Drop-off	Drop-off	N o	Yes
REVERE	N ortheast	55,000	18,275	16,579	Curbside	Curbside	N o	No
R IC H MO N D	W estern	1,501	833	833	Curbside	Curbside	N o	N o
ROCHESTER	Southeast	5,300	1,885	1,893	Curbside	Curbside	N o	N o
ROCKLAND	Southeast	17,400	5,267	4,895	Curbside	Curbside	Yes	No
ROCKPORT	N ortheast	7,300	4,500	2,845	Drop-off	Drop-off	Yes	N o
ROWE	W estern	361	155	155	Drop-off	Drop-off	No	No
ROWLEY	Northeast	5,500	3,000	N A	Subscription	Drop-off	No	No
ROYALSTON	W estern	1,250	550	500	Drop-off	Drop-off	No	Yes
RUSSELL	W estern	1,725	535	490	Drop-off	Drop-off	Yes	Yes
RUTLAND	C entral	9,000		N A	Subscription	Subscription	No	No
SALEM	Northeast	43,000	18,175	13,615	Curbside	Curbside	Yes	No
SALISBURY	N ortheast	8,082	4,875	N A	Subscription	Drop-off	No	No
SANDISFIELD	W estern	794	480	N A	Drop-off	Drop-off	No	No
SANDWICH	Southeast	22,000	7,335	6,535	Drop-off	Drop-off	Yes	No
SAUGUS	Northeast	26,000	9,975	8,785	Curbside	Curbside	No	No
SAVOY	W estern	705	345	126	Drop-off	Drop-off	Yes	Yes
SCITUATE	Southeast	18,223	7,500	5,256	Drop-off	Drop-off	Yes	Yes
SEEKONK	Southeast	14,000	4,939	4,782	Curbside	Curbside	Yes	Yes
SHARON	Southeast	18,350	6,000	6,000	Curbside	Curbside	No	No
SHEFFIELD	W estern	3,470	1,550	900	Drop-off	Drop-off	Yes	No
SHELBURNE	W estern	2,050	794	715	Drop-off	Drop-off	No	Yes
SHERBORN	Northeast	4,627	1,520	1,520	Drop-off	Drop-off	No	No
SHIRLEY	C entral	5,700	2,400	1,730	Curbside	Curbside	No	Yes
SHREWSBURY	C entral	33,456	11,280	10,000	Curbside	Curbside	No	Yes
SHUTESBURY	W estern	1,820	862	862	Curbside	Curbside	No	Yes
SOMERSET	Southeast	18,000	6,000	5,500	Curbside	Curbside	No	Yes
SOMERVILLE	Northeast	78,000	31,555	31,555	Curbside	Curbside	No	No
SOUTH HADLEY	W estern	17,196	6,736	6,765	Curbside	Curbside	Yes	No

Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
SOUTHAMPTON	Western	5,890	2,985	2,785	Drop-off	Drop-off	Yes	Yes
SOUTHBOROUGH	Central	9,800	3,526	2,980	Drop-off	Drop-off	Yes	N o
SOUTHBRIDGE	Central	17,000	9,000	6,000	Curbside	Curbside	N o	N o
SOUTHWICK	Western	9,000	3,300	3,300	Drop-off	Drop-off	Yes	N o
SPENCER	Central	11,289	5,135	2,553	Drop-off	Drop-off	Yes	Yes
SPRING FIELD	Western	150,000	61,000	45,488	Curbside	Curbside	Yes	N o
STERLING	Central	8,060	2,899	2,773	Curbside	Curbside	No	N o
STO CKBRIDGE	W estern	1,900	1,390	1,194	Drop-off	Drop-off	Yes	N o
STONEHAM	Northeast	22,300	8,000	7,000	Curbside	Curbside	Yes	No
STOUGHTON	Southeast	27,149	8,527	7,745	Curbside	Curbside	Yes	No
STOW	Central	5,626	1,800	N A	Subscription	Subscription	No	No
STURBRIDGE	Central	9,663	4,000	1,895	Drop-off	Drop-off	No	N o
SUDBURY	Northeast	17,925	5,658	1,250	Drop-off	Drop-off	Yes	Yes
SUNDERLAND	W estern	3,787	900	900	<i>Curbside</i>	Curbside	N o	Yes
SUTTON	Central	8,250	3,225	1,000	Drop-off	Drop-off	Yes	Yes
SW AMPSCOTT	Northeast	14,000	5,500	5,500	Curbside	Curbside	No	N o
SWANSEA	Southeast	17,000	5,864	5,592	Curbside	Curbside	Yes	Yes
TAUNTON	Southeast	55,976	23,167	19,500	Curbside	Curbside	No	Yes
TEMPLETON	C entral	7,700	3,200	N A	Subscription	Subscription	No	No
TEWKSBURY	Northeast	32,382	7,823	7,823	Curbside	Curbside	No	No
TISBURY	Southeast	4,500	3,100	N A	Curbside	Curbside	No	Yes
TOLLAND	W estern	452	538	219	Drop-off	Drop-off	Yes	No
TO PSFIELD	N ortheast	6,366	2,275	2,275	Curbside	Curbside	No	Yes
TOWNSEND	C entral	9,430	3,402	3,402	Curbside	Curbside	No	N o
TRURO	Southeast	2,067	1,000	1,000	Drop-off	Drop-off	Yes	No
TYNGSBOROUGH	N ortheast	11,000	4,014	3,900	Curbside	Curbside	No	No
TYRINGHAM	W estern	350	350	181	Drop-off	Drop-off	Yes	No
UPTON	Central	7,246	2,677	N A	Curbside	Curbside	No	Yes
UXBRIDGE	C entral	12,600	5,100	N A	Subscription	Subscription	No	No
WAKEFIELD	N ortheast	24,266	8,178	8,178	Curbside	Curbside	No	N o
WALES	W estern	1,834	790	382	Drop-off	Drop-off	Yes	Yes

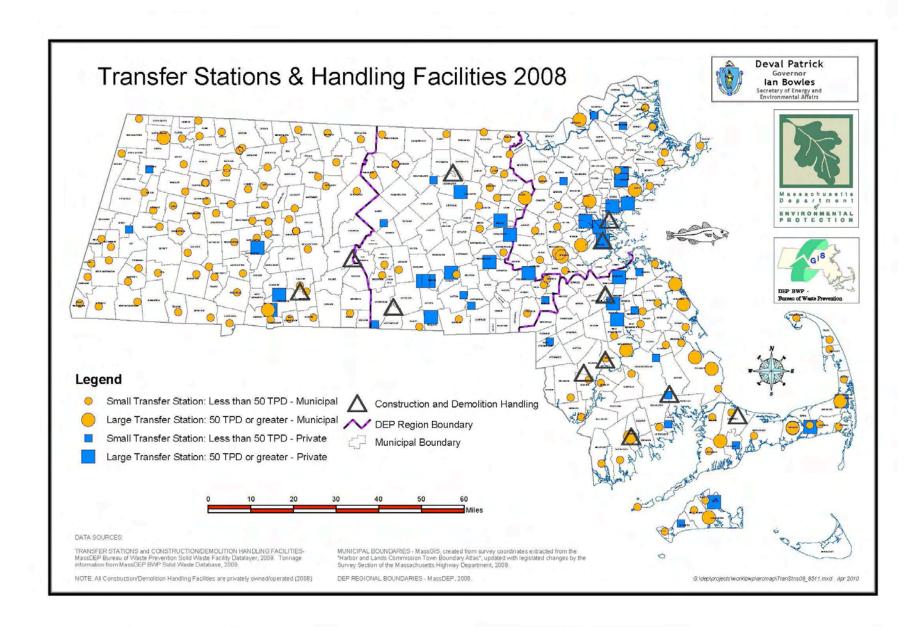
Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
WALPOLE	Southeast	24,080	8,500	7,400	Curbside	Curbside	No	No
WALTHAM	N ortheast	60,000	23,185	23,185	Curbside	Curbside	No	No
WARE	W estern	10,254	2,944	N A	Subscription	Subscription	No	No
WAREHAM	Southeast	23,724	<i>8,230</i>	840	Subscription	Drop-off	No	No
WARREN	W estern	5,000	1,875	650	Drop-off	Drop-off	Yes	No
W A R W IC K	W estern	753	285	250	Drop-off	Drop-off	Yes	Yes
WASHINGTON	W estern	546	200	200	Drop-off	Drop-off	No	No
WATERTOWN	Northeast	32,986	15,375	15,350	Curbside	Curbside	No	No
WAYLAND	Northeast	13,741	4,732	N A	Drop-off	Drop-off	Yes	Yes
WEBSTER	C entral	16,000	7,000	400	Drop-off	Drop-off	No	Yes
WELLESLEY	Northeast	26,215	8,900	7,563	Drop-off	Drop-off	No	No
WELLFLEET	Southeast	3,200	2,907	2,429	Drop-off	Drop-off	Yes	No
WENDELL	W estern	986	376	370	Drop-off	Drop-off	No	Yes
WENHAM	Northeast	4,500	1,320	1,320	Curbside	Curbside	No	Yes
WEST BOYLSTON	C entral	7,500	<i>2,</i> 570	2,570	Curbside	Curbside	No	Yes
WEST BRIDGEWATER	Southeast	6,789	2,304	2,304	Drop-off	D rop-off	Yes	No
WEST BROOKFIELD	C entral	3,700	1,200	NA	Subscription	Subscription	No	No
WESTNEWBURY	Northeast	4,528	1,491	1,491	Curbside	Curbside	No	No
WEST SPRING FIELD	W estern	27,537	11,839	8,569	Curbside	Curbside	No	No
WEST STOCKBRIDGE	W estern	1,500	678	628	Drop-off	Drop-off	No	No
WEST TISBURY	Southeast	2,467	1,755	750	Drop-off	Drop-off	No	Yes
WESTBOROUGH	C entral	18,000	6,500	6,500	Drop-off	D rop-off	Yes	No
WESTFIELD	W estern	42,000	13,700	9,600	Curbside	Curbside	Yes	No
WESTFORD	Northeast	20,787	8,200	7,600	Curbside	Curbside	No	No
WESTHAMPTON	W estern	1,468	575	575	Drop-off	Drop-off	No	Yes
WESTMINSTER	C entral	8,000	3,500	N A	Drop-off	Curbside	No	No
WESTON	Northeast	10,660	3,350	1,750	Drop-off	Drop-off	Yes	No
WESTPORT	Southeast	15,277	6,741	4,798	Drop-off	Drop-off	No	Yes
WESTWOOD	Northeast	14,000	5,012	4,574	Curbside	Curbside	No	No
W E Y MO U T H	Southeast	54,000	21,300	17,870	Curbside	Curbside	Yes	No
WHATELY	W estern	1,563	500	450	Drop-off	Drop-off	No	Yes

Municipality	MassDEP Region	Population	Total Households	Households Served by Municipal Disposal Program	Disposal Service	Recycling Service	Solid Waste Flat Fee	Pay- as- you- throw
WHITMAN	Southeast	14,072	5,109	4,348	Curbside	Curbside	Yes	N o
WILBRAHAM	W estern	14,882	5,417	2,125	Drop-off	Drop-off	Yes	Yes
W ILL IA MS B U R G	W estern	2,427	850	850	Drop-off	Drop-off	Yes	N o
W ILLIAMS TO W N	W estern	8,328	2,753	1,046	Drop-off	Drop-off	Yes	Yes
W IL MIN G TO N	Northeast	22,450	7,066	7,066	Curbside	Curbside	N o	No
W IN C H E N D O N	C entral	9,971	3,680	1,180	Drop-off	Drop-off	Yes	Yes
WINCHESTER	Northeast	22,275	7,700	5,078	Drop-off	Drop-off	Yes	No
WINDSOR	W estern	875	330	321	Drop-off	Drop-off	Yes	Yes
W IN THROP	Northeast	16,427	6,500	5,500	Curbside	Curbside	N o	No
WOBURN	Northeast	38,000	15,173	12,148	Curbside	Curbside	N o	No
WORCESTER	C entral	176,000	63,588	52,000	Curbside	Curbside	N o	Yes
W O R TH IN G TO N	W estern	1,270	500	500	Drop-off	Drop-off	N o	Yes
WRENTHAM	Southeast	10,500	3,800	3,400	Curbside	Curbside	N o	Yes
YAR MO UTH	Southeast	21,174	15,442	8,680	Drop-off	Drop-off	Yes	No

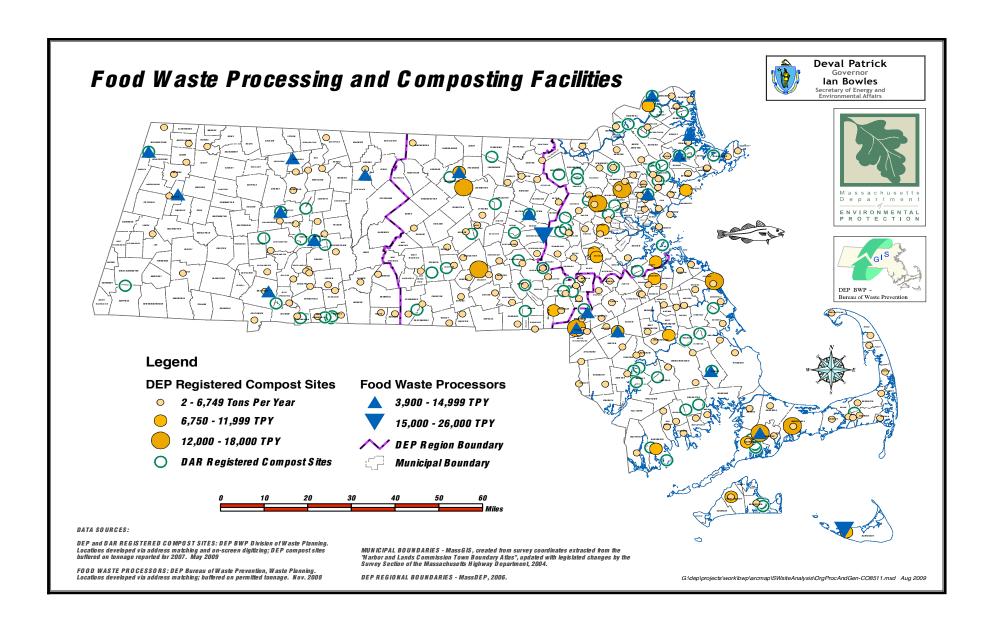
Appendix D



Appendix E



Appendix F



Draft **Appendix G: Massachusetts Recycling Loan Fund: Summary of Grants Awarded**

Date Closed	Company	Municipality	Description of Business/Loan	Loan	Leveraged (\$/K)	Jobs Created/Retained
Oct-10	Environmental Integrity Co.	Holyoke	Electronics recycling; equipment Composting company of municipal yard waste	\$200,000	\$405	16
Jun-09	Agresource (Loan #3)	Amesbury	and wastewater purchased equipment Purchase of equipment	\$130,000	None	12
Mar-09	AMT BioProducts, Corp.	New Bedford	for manufacturer of organic fertilizer Purchase of equipment	\$120,000	\$632	13
Dec-08	Rocky Hill Transport	Saugus	for composting & mulch Purchase of equipment for developer of	\$125,000	None	6
Aug-08	Recycline, Inc.	Waltham	consumer products made from recycled materials Debt refinance and working capital to	\$200,000	\$300	14
Mar-08	DW Clark, Inc.	East Bridgewater	manufacturer of metal castings Purchase of equipment	\$300,000	\$250	30
Apr-07	ERCS	Wilmington	for Carpet recycling Purchase of equipment	\$300,000	\$450	10
Jan-07	Costello Dismantling	Middleboro	for C&D recycling Purchase of equipment	\$150,000	None	45
Dec-06	Accutech Packaging	Foxboro	to mill plastics Purchase of equipment	\$270,000	None	60
Sep-06	Newland Farm	Norton	to process food waste Purchase of truck to haul	\$50,000	None	4
Aug-06	Jacques Construction	South Hadley	C&D debris Purchase of equipment for commingled	\$140,000	None	5
Aug-06	Dover Trucking	Norfolk	residential and C&D	\$240,000	None	3

			recycling			
May- 06	Destiny Polymers	Springfield	Purchase of equipment for plastics recycling Purchase a new construction and	\$300,000	\$1,450	10
Jan-05	New England Recycling	Taunton	demolition debris processing line Expansion of recycling facility, eventually to	\$500,000	\$1,950	30
Sep-04	LeBoeuf Rubbish Removal Brooks Interiors	Southbridge	handle construction and demolition debris Refurbishing office	\$200,000	\$708	24
Feb-04	Group	Wilmington	furnishings Composting company of municipal yard waste	\$150,000	None	56
Aug-03	Agresource (Loan #2)		and wastewater purchased equipment Paper converter using recycled content paper purchased a building for its operation, saving on	\$185,000	None	12
Apr-03	Baird & Bartlett	Lakeville	lease costs Auto salvage and scrap	\$225,000	\$2,524	20
Sep-02	Falmouth Recycling	Falmouth	recycler refinanced debt Manufacturer toner cartridges made from	\$300,000	None	7
Aug-01	Clarity Imaging Technologies	Woburn	recycled parts acquired working capital Metal recycler	\$250,000	\$850	58
Jul-01	General Metals and Smelting	Readville	purchased metals for recycling Manufacturer of plastic products, including the pink flamingo lawn ornament acquired	\$300,000	\$4,500	20
Jun-01	Union Products	Leominster	working capital	\$300,000	\$580	90

			Manufacturer of plastic products purchased machinery and			
Oct-00	SelecTech (Loan #1)	Taunton	refinanced debt Electronics reuse and recycling company purchased equipment	\$350,000	\$1,000	36
	Product Take Back		and acquired working			
Apr-00	Services	Billerica	capital	\$60,000	None	5
	Hanna Danas		Paper recycler covered relocation costs to a			
Feb-00	Hanna Paper Recycling	Mansfield	larger facility	\$200,000	None	70
160-00	, c	Mansheid	Composting company of municipal yard waste	\$200,000	None	70
	Agresource (Loan		and wastewater	4.5 00.000		0
Jan-00	#1)	Amesbury	purchased equipment Paper recycler purchased	\$200,000	None	9
C 00	Universal Fibers	Westfield	another recycling	¢200.000	\$850	11
Sep-99	Universal Fibers	westileid	company Clothing recycler	\$300,000	\$630	11
	Planet Aid, Inc. (two		purchased drop-off			
Oct-98	loans)	Holliston	containers	\$100,000	\$150	40
	,		Clothing recycler	,		
	Planet Aid, Inc. (two		purchased drop-off			
Oct-98	loans)	Holliston	containers	\$150,000		
T 1 00	B	*** 1 1	Molded fiber packaging	41.50.000	42.50	4.4
Jul-98	Eco Form	Walpole	refinanced debt Manufacturer of foam products launched a new	\$150,000	\$350	14
1 00	и тот	XX 7 1	product and acquired	¢150,000	¢450	10
Jan-98	Hands On Toys Erickson Materials	Woburn	working capital	\$150,000	\$450	18
	(Rouse Polymerics		Tire recycler acquired			
Nov-97	Northeast Inc)	Woburn	working capital	\$150,000	\$1,096	35
	,		Tire recycler purchased equipment and acquired	. ,	. ,	
Mar-97	Raynham Tire	Raynham	working capital	\$150,000	\$150	13

			Construction and demolition debris			
	D 1 .		recycler purchased			
	Rochester		property and financed			
Mar-97	Environmental Park	Rochester	start-up costs	\$150,000	\$2,450	22
			Metal recycler acquired			
Mar-97	Winthrop Steel	Fitchburg	working capital	\$125,000	None	16
			Metal recycler acquired			
Nov-96	Captiva Recycling	Lowell	working capital	\$100,000	\$350	8
			Can and bottle recycler			
			purchased equipment			
		West	and improved its			
Nov-96	Automated Recycling	Bridgewater	building	\$250,000	\$1,100	15
			Manufacturer of plastic			
			products purchased			
Oct-96	SelecTech (Loan #2)		equipment	\$250,000		
	` ,		Wood and paper			
			recycler acquired			
Feb-96	Wood Recycling	Peabody	working capital	\$150,000	\$1,000	47
	, ,	•	Metal recycler			
			purchased property and			
Feb-96	wTe Recycling	Bedford	equipment	\$100,000	\$300	25

Appendix H: List of Solid Waste Master Plan Discussions and Participating Organizations

The Massachusetts Department of Environmental Protection (MassDEP) has held extensive meetings and discussions involving an extensive and diverse group of stakeholders as part of the process of drafting a new Solid Waste Master Plan (2020 Plan). This appendix summarizes the meetings that MassDEP has held or participated in relative to the 2020 Plan and summarizes the participating organizations in these discussions.

Solid Waste Advisory Committee

MassDEP has held discussions or provided updates relative to the 2020 Plan over the course of at eight Solid Waste Advisory Committee meetings over the course of two years. Meeting notes from these meetings can be found on the MassDEP web site at http://www.mass.gov/dep/public/committee/dswmpu02.htm. The relevant SWAC meeting dates are listed here:

Oct 25, 2007 Jan 24, 2008 April 24, 2008 June 26, 2008 October 23, 2008 January 22, 2009 April 23, 2009 June 25, 2009

Stakeholder Meetings

In December 2008 and January 2009, MassDEP held six Stakeholder Meetings around the state to obtain input from and discuss issues with a wide range of stakeholders. A summary of comments from these meetings is available on the MassDEP web site at

<u>http://www.mass.gov/dep/public/hearings/smwpmtgs.htm#framework</u>. The meeting dates and locations were:

Boston, December 11, 2008 Wilmington, December 16, 2008 Holyoke, January 6, 2009 Lakeville, January 8, 2009 Pittsfield, January 13, 2009 Worcester, January 15, 2009

Workgroup Meetings

Based on the input received at these discussions, MassDEP identified seven sets of issues that required more in-depth discussion and information sharing. MassDEP formed seven ad hoc workgroups to address these issues and held between two and three meetings of each workgroup during February – April 2009. MassDEP held a total of 18 workgroup meetings with 275 participants overall. The workgroup meeting dates are listed below. Workgroup summaries can be found on the MassDEP web site at http://www.mass.gov/dep/public/committee/swmpwkgp.htm.

Reducing Waste Generation Meetings: March 3, March 11, March 25 41 participants

Education

Meetings: February 26, March 16, March 26

38 participants

Municipal Capacity Building/Regionalization Meetings: February 24, March 16

38 participants

Waste Bans/Business Recycling Meetings: February 26, March 10 12 participants

Meetings: March 13, March 30 43 participants

Eliminating Barriers to Siting Waste Diversion Facilities Meetings: February 25, March 11, March 25 41 participants

Performance and Viability of Technologies for Residual Waste Meetings: March 5, March 18, April 9 62 participants

Other Meetings and Presentations

MassDEP also has met with a number of other organizations to discuss the development of the 2020 Plan, including:

Solid Waste Association of North America, Massachusetts Chapter Meeting, March 27, 2008 MassRecycle Meeting, April 17, 2008

Western Massachusetts Municipal Recycling Council, June 3, 2008

Environmental Business Council (meeting with solid waste generators, haulers, and consultants), June 24, 2008

Solid Waste Association of North America, Massachusetts Chapter Conference, September 23, 2008

Organics Subcommittee Meeting, October 14, 2008

Environmental organizations and advocates, October 17, 2008

Southeast Municipal Recycling Council, January 14, 2009

C&D Summit, January 16, 2009 and January 28, 2010

MassRecycle Board Meeting, February 25, 2009

Organics Summit, March 4, 2009 and April 6, 2010

Environmental Business Council/Associated Industries of Massachusetts MassDEP Day, April 18, 2008

Participating Organizations

Through these meetings, MassDEP has met with hundreds of individuals to discuss the Solid Waste Master Plan development. Many people and organizations have attended several of these meetings and/or submitted written comments and suggestions. Some of the participating organizations include:

Environmental/Public Health Advocates

ACE

Acton Citizens for Environmental Safety

Berkshire Environmental Action Team (BEAT)

Clean Water Action

Conservation Law Foundation

Don't Waste Massachusetts

Environmental League of Massachusetts

Environment Massachusetts

Green Decade/Newton

Green Delaware

GREEN Northampton

MassPIRG

MassRecycle

Residents for Alternatives to Trashing Southbridge (RATS)

Sierra Club, Cape Cod Chapter

Sierra Club, Massachusetts Chapter

Sierra Club Zero Waste Committee

Saugus River Watershed Council

Toxics Action Center WasteCap of Massachusetts Watertown Citizens for Environmental Safety

Individual Citizens

Hundreds of individual citizens have attended meetings or submitted written suggestions.

Municipal/Regional Governments

Town of Acton

City of Agawam

City of Boston

City of Cambridge

Cape Cod Commission

Town of Concord

Town of Framingham

Franklin County Solid Waste Management District

City of Gardner

Hilltown Resource Management Cooperative

Town of Lexington

City of Lynn

City of Newton

City of Northampton

Northern Berkshire Solid Waste Management District (NBSWMD)

City of Salem

Town of Saugus

City of Somerville

South Shore Recycling Cooperative

Town of Southbridge

City of Springfield

City of Taunton

Town of Tewksbury

Town of West Springfield

Tri-Town Alliance (Quincy, Braintree, Weymouth)

Western Massachusetts Municipal Recycling Council

City of Worcester

Recycling Product Manufacturers

Agresource

Conigliaro Industries

CRT Recycling

D&A Associates

MA Aggregate & Asphalt Paving Association (MAAPA)

The Newark Group

Perlmutter Associates

PJ Keating

SelecTech, Inc

Solid Waste and Recycling Companies and Consultants

Allied Waste

Alternative Resources, Inc

ArrowBio Waste Management

Cambridge Environmental

Casella

Commonwealth Resource Management Corp

Covanta

Day Cycle

EL Harvey & Sons

Frade's Disposal

International Paper Products Corporation

IST

National Solid Waste Management Association, Massachusetts Chapter

The Resource Tech Group

NRG Energy, Inc

Waste Management/Wheelabrator/Recycle America

Ze-Gen

State Agencies

MassDevelopment

Operational Services Division (OSD)

Department of Energy Resources

Office of Technical Assistance and Technology

Toxics Use Reduction Institute at UMass Lowell

Center for Clean Production at UMass Lowell

Appendix I: List of References Consulted

Overview

As part of the process to develop the Draft 2020 Plan, the Massachusetts Department of Environmental Protection (MassDEP) has conducted research and reviewed reports on a wide range of waste reduction and solid waste management issues. This document provides a summary of the references consulted. This is not intended to be a complete listing of references, but rather to provide readers with a general understanding of the level of research and information gathering that MassDEP used to inform development of the Draft 2020 Plan. This research began in the summer of 2007 and continued through the summer of 2009. The research summarized here is in addition to the external participation and input described in Appendix I, although there are many connections between the two. While MassDEP conducted this research specifically for the purpose of developing this plan, solid waste and waste reduction issues; including program strategies, statutes and regulations in other states and countries, and treatment and processing technologies; are continually evolving and ongoing research and information gathering is necessary to inform the implementation and future revisions to the 2020 Plan.

The documents, presentations, and other information resources that MassDEP consulted can be grouped into the following categories, which are described further below:

- Laws, regulations, program strategies, and data from other countries
- Laws, regulations, program strategies, and data from other states
- Local and regional (within states) waste reduction strategies, laws, and regulations (within Massachusetts and in other states)
- Relative environmental benefits and impacts of alternative waste management approaches, including evolving technologies
- Recycling markets and economic benefits of recycling

Other Countries

- MassDEP reviewed many documents about solid waste and waste reduction issues in other countries, including:
 - o The 27 European Union member countries
 - o Canada and individual Canadian provinces
 - o Japan and China
 - o Australia and New Zealand
- MassDEP conducted particular research on European Union policies and regulations, including both European Union directives, and implementation of directives by individual countries.
- MassDEP also reviewed available information on recycling rates in other countries.

Other States

- MassDEP reviewed information about programs in approximately 40 other states. Particular emphasis was placed on Northeast states and states on the West coast which were identified as having effective waste reduction, recycling, and composting programs and achieving high recycling/diversion rates. Types of information sources consulted include:
 - o State laws and regulations
 - o State solid waste master plans
 - o State program descriptions and outreach materials
 - o State funding mechanisms
 - o State solid waste data reports
 - o State level product stewardship/producer responsibility initiatives
 - o State agency websites
 - o Telephone conversations with officials from other states
 - o Conference and webinar presentations by officials from other states
 - o Periodicals, trade association publications, and newspaper articles

Local/Regional Programs

- In addition to researching national and state level programs, MassDEP also has conducted research on smaller scale programs, regulations, and policies at the local level or regional level (within a state.) Types of initiatives reviewed include incentive programs, laws and regulations, innovative waste reduction programs, and development of new technologies and facilities.
- Some of the local government programs reviewed include, but are not limited to, San Francisco, CA; Los Angeles, CA and Los Angeles County; Portland, OR/Metro; Seattle, WA; New York City; and Chittenden County and Central Vermont Solid Waste Management Districts in Vermont.

Environmental Benefits/Impacts

- MassDEP has reviewed dozens of reports and studies about the relative environmental impacts and benefits of different waste management approaches, including source reduction, recycling, composting, landfilling, municipal waste combustion, and other technologies such as anaerobic digestion, gasification, and pyrolysis. Some of these reports are lifecycle analyses, others are more narrowly focused (e.g., studies on the air emissions of different types of solid waste conversion technologies).
- MassDEP's research in this area led us to issue a request for proposals for a consultant to review and summarize existing lifecycle studies relative to solid waste management, and to provide MassDEP with a report summarizing these studies, providing an analysis of these studies and how they apply to Massachusetts, and summarizing best management practices from other states and countries about how best to advance our solid waste management system to achieve the best environmental outcomes.

- MassDEP engaged the Tellus Institute to conduct this review. The Tellus Institute report, titled Assessment of Materials Management Options for the Solid Waste Master Plan Review, was completed in December 2008 and posted on the MassDEP web site at http://www.mass.gov/dep/recycle/priorities/dswmpu01.htm. A cover letter from MassDEP and comments received on the Tellus Report that include additional information are available on the same web page.
- As a follow-up to the information received via the Tellus Institute's report and comments submitted on the report, MassDEP held a Solid Waste Master Plan workgroup titled Performance and Viability of Technologies for Residual Waste. This workgroup is described more in Appendix I and more information is available on the MassDEP web site at http://www.mass.gov/dep/public/committee/swmpwkgp.htm.
- MassDEP also has reviewed different models for calculating the greenhouse gas emissions and
 reductions from different waste management practices, including using the EPA Waste Reduction
 Model (WARM) to analyze different scenarios for managing mixed solid waste, as well as individual
 materials, and how lifecycle greenhouse gas emissions would change due to various recycling rates
 and different disposal scenarios.
- MassDEP also has reviewed reports based on other models including the US EPA Decision Support Tool and the Northeast Recycling Council Environmental Benefits Calculator (which uses the WARM model for GHG analysis).

Recycling Markets/Economic Benefits

- MassDEP also conducted research on the economic benefits of different materials management strategies, including material management costs and recycling markets.
- Although recycling market research focused in part on the short term due to relatively low recycling markets in 2008 and 2009, this research also focused on longer-term recycling market trends.
- In a related matter, the Northeast Recycling Council, a regional group of 10 Northeast states including Massachusetts published an updated Recycling Economic Information Study in February 2009, which is available on the web at www.nerc.org.
- MassDEP also has reviewed information about the comparative benefits and costs of single-stream
 versus dual stream recycling, including reviewing information from Massachusetts municipalities and
 materials recovery facilities that have switched from dual-stream to single-stream collection and
 processing.